

THE BRICKBUILDER

VOL. 11
NO. 8

AUGUST
1902

THE BRICKBUILDER.

PUBLISHED MONTHLY BY

ROGERS & MANSON,

85 Water Street, Boston, Mass. . . P. O. Box 3282.

Entered at the Boston, Mass., Post Office as Second Class Mail Matter, March 12, 1892.

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Subscription price, mailed flat to subscribers in the United States and
Canada \$5.00 per year
Single numbers 50 cents
To countries in the Postal Union \$6.00 per year

SUBSCRIPTIONS PAYABLE IN ADVANCE.

For sale by all newsdealers in the United States and Canada. Trade supplied by
the American News Company and its branches.

ADVERTISING.

Advertisers are classified and arranged in the following order:—

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Advertisements will be printed on cover pages only.

THE CAMPANILE OF ST. MARK.

NOTHING that has happened for a great many years seems to have so profoundly impressed the art-loving public both at home and abroad as the recent collapse of the tower which for so many hundred years has stood watch over the Piazza of San Marco. While the campanile was by no means a monument of the first order of architectural merit it was an exceedingly interesting composition and one which will forever be associated with the Venice we have known in the past. From a purely artistic standpoint its total destruction does not imply such a very severe loss to the art treasury of the world, but at the same time it is a monument which we have every hope will be speedily replaced in its former condition and will continue to serve the purpose for which it was so fittingly adapted. The world does not build towers of that description now, and we trust that the work of reconstruction will not only be undertaken at once but will proceed with more speed than is usually characteristic of Italian public works.

A loss of this kind is so unexpected, and it is so hard to realize that a structure which seemed to be so stable in its build should be entirely destroyed, that it is small wonder some of the newspaper correspondents and even some of our artists should become slightly hysterical in regard to it. We have seen it stated very gravely that

the cost of rebuilding will be anywhere from a million to a million and a half dollars. If this amount were in francs instead of dollars it would even then be far in excess of what such a structure ought to cost. A little calculation will show how absurd are the reported estimates. The tower was approximately 42 feet square and 323 feet high. As considerable of this height was pyramidal roof and open loggia it would be fair to assume the cube of the building at not over 550,000 cubic feet. There was almost no finish whatever about it except what appeared on the outside. The construction is of the kind that could be pushed with almost any desired rapidity, the foundations are all ready to begin on, and by all methods of comparison we cannot feel that a building of this sort ought to cost at the very outside over twenty-five cents per cubic foot. We have had estimates from builders as low as fifteen cents per cubic foot for just such work. At twenty-five cents the total cost would be \$137,500. This is a long ways from the \$1,200,000 which some of our friends are claiming should be subscribed for at once by every lover of art throughout this country and Europe.

The foundations of the campanile, we have every reason to believe, are in perfectly good condition. The tower is built upon oak piles which were driven into the mud, the tops being cut off about seventeen feet below the piazza level or ten or twelve feet below the water line. These piles were uncovered and examined by Mr. C. H. Blackall in 1885 and were then found to be in apparently perfect condition. Some pieces of the piles which were broken off at that time as a souvenir are apparently now as well able to resist such loads as were put upon them as if they were of new wood. Above the piles was a double grillage of larch or hard-pine timbers about 6 x 8 inches each, and on this grillage began the solid stone foundation work. The foundations are perfectly good for another thousand years at least, and the failure of the superstructure was in no wise due to any insecurity or any settlement of the foundations. The whole of the Istrian coast about the mouth of the Poe has been settling at a known rate ever since the time of the Romans, but the subsidence has been so gradual that so far as is known there have been no displacements of buildings.

LIKE most all calamities which when they occur seem like dispensations of Providence, the cause for the falling of the campanile is an extremely simple one and the conditions giving rise to it were due entirely to human negligence or carelessness. By summing up the reports which we have received it appears that the Logetta on the side of the campanile toward St. Mark's was under the care of one engineer or director, while the campanile itself

was controlled by another, a duality of management which is by no means uncommon in Italian cities. A fireplace was cut out of the inner surface of the outer wall of the campanile on the side towards the loggia and the flue from the fireplace was carried across the wall towards the corner so as to almost entirely cut away the inner half of the wall. The patching was undoubtedly done in such a way as to take little account of careful pinning. Next, a course of stone which was built into the outer wall of the campanile so as to form a portion of the roof of the Loggetta was to be taken out and metal flashing substituted therefor. This stone course was several inches thick and the stones ran quite a distance into the wall. Instead of shoring up the building before these were removed or taking out alternate stones at a time, apparently the whole course was removed, with the immediate result that the tower wall settled and began to crack. Even then the structure could have been preserved if there had been some one on the spot with nerve and knowledge sufficient to take proper precaution, but apparently no one knew how or dared. The piazza was cleared of people and the helpless engineers and constructors stood around wringing their hands and waiting for one of their grandest monuments to tumble into dust, which of course it did in a leisurely, regretful way, not falling in a mass but apparently squashing out into a misformed heap. There was so little lateral motion in the collapse that the large statue which formerly crowned the apex of the roof of the tower came down and imbedded itself in the debris within a few feet of the foundations, and the adjoining buildings were but slightly injured. The mortar in which the brickwork for the tower was set appears to have been entirely of lime and sand and was dried almost to a powder without hardening, so that it possessed practically no binding quality, but there is little doubt that if the cutting into the base on both sides had been done with any degree of foresight or if there had been some one on hand who understood how to shore up the building the tower would never have collapsed.

IF there are any more such towers in Venice—and to judge by newspaper scare lines they are nearly all of this kind—it is high time the Venetian authorities sent off to America for some capable builder's foreman who would know how to protect such structures and to keep them from tumbling into the street.

There is every prospect, however, that the tower will be rebuilt at once. With commendable despatch, and emulating the historical personage who so carefully locked his stable door after the thief had paid his visit, the Venetian authorities have placed what is left of the campanile under the care of Sig. Giacomo Boni. Sig. Boni was associated with Mr. Blackall in the investigations of the foundations in 1885. At that time he was in charge of the repairs of the Ducal Palace. Since then he has had an important post in Rome in charge of the antique monuments of the Eternal City. He is a man who is well educated, well posted and thoroughly competent to take care of the work and prevent such accidents in structures under his care. We very much doubt if the campanile would have fallen at all or been endangered had it been under his direction, and the city of Venice is

certainly showing most commendable wisdom, even if it be somewhat late, in summoning such a man to its aid. Subscriptions have been opened calling upon the public for funds to aid the rebuilding, and unless the reconstruction is going to be on a scale of magnificence far beyond anything that existed in the past the money will be very soon forthcoming.

WHY A BUILDING DID NOT FALL.

APPROPOS of the fall of the campanile and the paralyzed manner in which the Italian authorities seem to have been unable to avert the calamity, we are reminded of an incident which occurred in connection with the erection of one of the large office buildings in New York City some twenty years ago. This structure was one of the first of the heavy office buildings, and while by no means as tall as what we have become familiar with since, the column loads were very considerable and required some careful manipulation. The building was partly on made and partly on natural ground, and for some reason the foundations were partly upon the earth and partly upon piles. It is a well-known quality of piles driven into the earth that after they have once acquired a set they can be very heavily loaded without any appreciable settlement until the load becomes so great that the skin friction and resistance of the soil are overcome, when the pile suddenly settles very perceptibly until it comes down to a bearing. In other words the pile presents considerable inertia to the load. This is what happened in this case, and after the masonry was all in place and the columns very heavily loaded one of these columns under an inner corner of the building began to give way. We remember the very graphic description of what happened given us by the builder who had charge of the work,—how he stood beside the column putting his ear to the iron-work and could hear it snapping and giving way, and how he took a stand at the entrance to the building with a crowbar and by sheer pluck and muscle forced the badly terrified workmen to get the necessary shores in place and hold up the building. He was successful. The building did not go down, but he did not have many seconds' leeway, and it was a kind of experience which left its mark upon him for years.

THE AMERICAN PARK AND OUTDOOR ART ASSOCIATION.

THE meeting of the American Park and Outdoor Art Association in Boston August 5 was the occasion for presenting to the public some very interesting facts in regard to the growth of the public park system in this country. Of all our civic improvements the public parks undoubtedly appeal most strongly to the greatest number. Quite aside from the physical well-being of the populace which these parks minister to there is the large question of æsthetic cultivation and growth in civic spirit which is fostered by a well-ordered, well-designed and well-kept park system. President Eliot delivered the principal address before the association, and it is especially fitting that he should do so, both as a representative Boston citizen and also because of the deep interest which he took through his son, the late Charles Eliot, in developing some of the most beautiful park systems in our country.

The Business Side of an Architect's Office. III.

BY D. EVERETT WAID.

SEVERAL large contractors in New York have their own draughting rooms where a dozen or more draughtsmen are at work, not making shop drawings, but redrawing architects' details. The details which come from many architects' offices are so inaccurate, incomplete and impracticable that they win very disrespectful remarks from contractors and make necessary the maintenance of draughting rooms as above remarked. From this it is an easy step for influential contractors to offer to furnish to owners the entire architectural service. Such offers will be listened to if owners know too many instances like one in which an inexperienced architect with a "social pull" designed a heavy warehouse; the steel work in his building was re-designed in a way to effect a saving of \$50,000. When the artist comes to believe that construction or disagreeable "engineering" is not an essential part of his art, then will architecture be emasculated, and architects may seek employment under contractors and engineers. If this digression may be pardoned, to emphasize the importance of the architect being thoroughly trained and fully informed in practical construction, some remarks concerning drawings and specifications may be made in continuation of those in the May issue.

GUARANTEES.—If a contractor is to be put under a guarantee enforceable in law some discretion must be granted to him by the specifications; at the same time it must be kept in mind that guarantees in general are unreliable and architects are not safe in trusting too much to them. After trying to make a contract binding, however, one might have serious cause to regret it if he specified for example a "granolithic" or "kosmocrete" walk with a five-year guarantee. The exact constitution of the concrete should be given in detail; it may be made richer but not poorer, and the top finish may be thicker but not thinner than specified.

A heating contractor may be required to stand behind his work if he has had the option of increasing the amount of radiation or increasing the size of the fan; but not so if he has been allowed no discretion in the design of his installation.

INSPECTION.—Specifications should be very explicit and rigid in requiring inspection and tests of materials. Some of the best-known offices include in their specifications very full descriptions of requirements for cements, and then follow them up by making some of the simpler tests in their own offices or by employing experts. Frank Miles Day & Bro. have this provision: "Tests shall be made by chemists named by the architects and paid by the contractors, upon the approval of the bills by the architects. The following allowances shall be made and shall be paid for all cement tested, whether accepted or rejected. If in barrels, six cents per barrel for all lots of 300 barrels or more and nine cents per barrel for all lots of 200 barrels or less . . ." etc.

INSURANCE.—In the matter of insurance the last-named architects, who have a most carefully written

"General Conditions" of some six or eight pages, specify as follows:

"INSURANCE.—Each contractor shall insure his work while in his charge against damage or destruction by the elements, and for any loss of the contractor the owner will not, under any circumstances, be accountable; but when payments shall have been made, the owner will protect himself by insurance to cover the interest which he has acquired in the building."

DETAIL DRAWINGS.—Cope & Stewardson and some other offices have reduced the inconvenience of full-size detail drawings to a minimum by using sheets of bond paper 27 inches by 40 inches, with a blank title printed in one corner. These sheets stand rubbing and hard usage and give good prints from lead pencil lines. Surprisingly few full-size-details actually need to be larger than 27 inches by 40 inches, and such can be folded to the standard size.

ORDERING BLUE PRINTS.—The order book illustrated (Fig. 1) is made of alternate yellow and thin white leaves. Carbon paper and pencil are used to write the order in

Office of		D. EVERETT WAID, ARCHITECT, 186 FIFTH AVE., NEW YORK.		Archts.	Order No.	315
Order for Prints to				Soltanians		Date
				3/14		1902
BLOC NO.	SHEET NO.	COPIES	KIND	ON	SIZE	SQ. FT.
526	3	2	Blue paper		32x40	8.88
"	7	"	"	"	"	"
532	107	1	Blue cloth		18x24	3
"	108	"	"	"	"	"
"	109	"	"	"	"	"

N. B.—BILLS MUST SHOW ORDER NO. AND BLOC NO. WITH EACH ITEM.

FIG. 1. FORM FOR USE IN ORDERING BLUE PRINTS.

duplicate, and the use of "building" or "commission" numbers makes the writing of an order a simple operation. The perforated yellow leaf is torn out and sent with the tracings. By means of a table of sizes, the area of any drawing can be read at a glance and the order made complete. The bills at the end of the month are quickly checked over with the order book.

ISSUE AND RECEIPT OF DRAWINGS.—The illustration (Fig. 2) shows a book which has proved to be simple and satisfactory for recording the issue or receipt of drawings, or in fact anything which goes from the office or comes into it, even to samples of hardware. Each entry has an "issue number" written by hand or with a numbering machine. Printed receipts bear corresponding numbers (see Fig. 1 in the May BRICKBUILDER), and each drawing is marked with the respective issue number. If one drawing is issued more than once it will bear corresponding issue numbers which, by reference to the book, show to whom that identical drawing went. When a drawing is brought back the issue number locates the place in the book where the credit should be given and the date of return is entered instantly. A receipt is sent for every drawing received and one is required for every one sent. The signed receipts are filed in a box or tray in order of the issue numbers, and can be found quickly when it is

desired to convince a contractor that he really did have a certain drawing. When a receipt arrives a check mark is made opposite the book record. If any receipt fails to come, a duplicate receipt is forwarded, with request for information if the drawing has not reached its destination. This book, strongly bound in cloth, lies always on the office counter and entries are made in ink by the office boy just when the issue occurs. There are no transcriptions or memoranda to be posted afterward. It is quick work to run one's eye down the columns to find a given name or a given drawing in answer to either of two frequent typical questions, namely, "What contractors have had sheet No. 4," of a certain building, or "Has sheet No. 17 been sent to Brown and Smith?"

This issue book has proved so satisfactory in use that the writer has been disposed to congratulate himself on the issue numbering scheme. But he is not the less pleased to find that Cope & Stewardson also originated the same device and that they are equally well satisfied with its use. In the issue book shown in the illustration (Fig. 2) it is intended to run the series to 9999, the limit of a four-figure numbering machine, and then begin over again.

BOOK NO.	DRAWING NO.	REVISION NO.	SPECIFICATION	DESCRIPTION AND PURPOSE	TO OR FROM	DATE	BY	FOR
2931	116	518	4 copies	front to Supt	J. W. Martin	3/5		
2932		526	Major	to Cal. Office	J. W. Martin	3/5		
2933		527	Major	to Cal. Office	J. W. Martin	3/5		
2934	712-714	518	Electrical	front for approval	A. B. Rethers	3/1		
2935		518	Dynamometer	see 6788	Chas. Stewardson	3/1		
2936	19	534	Boys' Slides	tracing cloth from	Cal. Office	3/2		
2937		526	Electrical	& answer	Dr. M. W. Morgan	3/2		
2938	200-202	530		front for estimate	Johnson & Morn	3/2		
2939	For Kitchen	523		& answer for approval	Mr. King	3/2		
2940	200-202	530	Electrical	front for estimate	Baker & Smith	3/3		
2941		518	Dynamometer	for estimate	Dr. B. B. B.	3/3		
2942	4-1	521		front	J. W. Martin	3/3		
2943	4-1	521			Smith & Smith	3/3		
2944	15	518		for use in connection	Mr. B. B. B.	3/3		
2945		521		for use in connection	Mr. B. B. B.	3/4		
2946	20-1-2	533		tracing paper for approval	Mr. King	3/5		
2947		518		Complete Memoranda	J. W. Martin	3/5		
2948								
2949								
2950								
2951								
2952								
2953								
2954								
2955								

FIG. 2. A PAGE FROM THE "ISSUE BOOK."

While enumerating matters incidental to the preparation of drawings and specifications, note may be made of a good habit to establish in an office in order to record the things which should be recorded but which escape the correspondence. This is referred to in the office as the

"MEMO-RECORD."—An admirable method of preserving memoranda has been developed in Mr. George B. Post's office. A thin flat blank book about letter size is used,

one for each building. If a client calls, the fact, with date, is noted in this book, together with memoranda of any instructions which he gave. Rough sketches, scraps of paper bearing telephone messages, or notes made outside the office are pasted into this little book. The manager of the office reads over these memoranda, dictates such letters as they suggest, and sends the book by an office boy for the inspection and instruction of all concerned, and the draughtsman, the engineer and the superintendent read them over and each signs his initials opposite each entry in which he is interested, as evidence that he has received his instructions. This excellent idea is doubtless used in some form in every office. Instead of a book we may tear off a leaf from a yellow pad, as needed (it is well to buy yellow pads, letter size, too, by the gross and have them everywhere, ready for use on the draughting tables, where they may be used for calculations, etc.), give it date and building number, and it finds its place in the file, and the boy can pin the sheets together as they accumulate in the file. A pad is lying on the reception room table, and after the client's departure the date, etc., is stamped at the top of the pencil memoranda and the record is preserved without transcription. When one has returned from meeting a building committee his rough notes may be filed just as he made them or he may dictate a fuller account to the stenographer, who typewrites the record on the same yellow pad paper.

A useful memorandum book to be kept by the office boy is a record of every caller (save solicitors who fail to obtain interviews). A blank book is ruled off in columns with headings at top of page, thus:

NAME	CALLED	DEPARTED	ASKED FOR	SAW
Mrs. Tuxedo . . .	2.30	3.30	Mr. S.	Mr. A.

This memorandum book, which takes an inappreciable part of the office boy's time, has been found incidentally useful in convincing clients of the justice of charges for consultation,—clients who had no realization of the number of their calls and the hours of the architect's time occupied by them.

TAKING BIDS.—For convenience in tabulating bids and getting a list of possible deductions from the estimate as per specification, a form of tender is often written and bound with the specifications.

Some architects take sub-bids, even when work is to be let to a general contractor. Frank Miles Day & Bro. follow two methods. In some cases they send lists of acceptable sub-contractors to all the invited general contractors and no other sub-contractors are considered. In other cases, and this method they prefer, they take all the sub-bids and give out only the lowest bids to the general contractors. In the event that revised estimates have to be taken, no one besides the architects knows who the lowest bidders were on the first competition. This method involves painstaking labor, but Mr. Day considers that they are well rewarded in securing execution of work by reliable sub-contractors.

EXTRAS.—The most fruitful causes of discord between client and architect are extras. Not because of their

amount, which may be trivial, does the trouble arise, but because they were unexpected, or incurred without permission. If an extra is necessary because of some oversight of the architect he should be frank with the owner or else pay the cost from his own pocket on the spot. He should not "squeeze" the contractor as is too often done, and he should put behind him as satanic the temptation to trade off for the extra some deduction which can be easily made; frequently the latter thing is advisable, but it is dishonest if done without the owner's knowledge.

The same question of ethics comes up in connection with changes in kind of materials or manufacture. It is a good policy, when practicable, to give the contractor the choice between two kinds. But when the specifications do not permit such option, the architect cannot be too

annoyance even of signing orders. The form or order illustrated in Fig. 3 has been found satisfactory with two exceptions,—it is too much labor to write the same order over three times, and more space is needed for describing the work required. Alden & Harlow have overcome these objections admirably by using a form which is printed on thin strong paper and is folded accurately so that by the insertion of carbon sheets three copies are written at once. If they are made two thirds the size of a letter head, each order folded once will be the right size for the contract folder and the document file. The order blanks may be printed with copying ink, and letter-press copies are taken, so that a record is kept in the office even when the three copies are out for signature. Having the press copy, only brief entries need be made on the stubs,

FIG. 3. ORDERS FOR EXTRAS, DEDUCTIONS AND CHANGES.

careful about allowing a change. He should always make such authorization in writing and should not forget to obtain the owner's approval. Cases have occurred in which an owner required his architect to pay for a difference in cost between the thing specified and the thing used.

Printed forms are desirable which can be used for extras, or deductions, or changes involving no difference in expense. It is well to make them in triplicate, and one should be sent to the owner for his information even if the circumstances are such that the architect is authorized to order extras and does not wish the owner to suffer the

thus minimizing labor and chance of error. The orders should state extension of time, if any is to be allowed. The printed matter shown on the backs of these orders makes them useful for original contracts. In other words, for minor works each of these order forms constitutes a complete specification and contract.

R. W. Gibson uses a printed form which serves first as a request for an estimate, then as a bid, and finally, when signed by owner and architect, it goes to the contractor as an order for extra work. At the bottom of the order is printed the following: "No work will be cer-

tified as Extra Work beyond contract unless an order on this form has been given. The application for an estimate is in no case to be considered as an order for the work."

EXTRAS AND DEDUCTIONS				CERTIFICATES ISSUED			
DATE	ITEM	REMARKS	AMOUNT	DATE	ITEM	REMARKS	AMOUNT
May 1			11.50	May 16			2.00
May 20			72	June 19			7.00
June 6		25		June 26			25.00
June 7			3	July 27			12.00
			12.25				
			25				
			12.00				

CONTRACT	Mason Work
DATE	May 1 st 1901
BUILDING	Residence
LOCATION	Spring Lake N. Y.
OWNER	Michael Ryan
ADDRESS	1133 Broadway N. Y.
ESTIMATOR	John Smith
ADDRESS	241 Fulton St. N. Y.

PAINTING	
GLASS	
WIRE MESH	
ROOFING	
WATERPROOFING	
CONCRETE	
CEILING	
PLUMBING	

FIG. 4. THE CONTRACT FOLDER, USED INSTEAD OF A CONTRACT BOOK. CONTRACTS AND ORDERS ARE KEPT IN THE FOLDERS.

CONTRACT RECORD.—The "Contract Folder," or jacket, shown in the illustration (Fig. 4) takes the place of a book, and has the advantage of elasticity. One folder is used for each contract. When general contracts are let, one may be used also for each sub-contract. Copies of contracts, orders and accepted estimates are kept together in the respective folders. The bunch of folders having to do with one building is secured with a rubber band and placed in special drawers or pigeon-holes or a regular document file. This method of keeping contract accounts, one of the most satisfactory features in the office, has been in use for some years. The first architect to use it, I believe, was H. K. Holsman of Chicago. He originated a convenient little device by which the folders are self indexing. In whatever order they happen to be one can pick out instantly the particular folder wanted by means of the black spot on the edge, which is opposite the corresponding name in view in the list of contracts on the top folder.

ONE of the greatest engineering achievements which the world has ever witnessed has just been completed in so quiet and unostentatious a manner that only those who have been following it closely are aware of its termination. The dam, or barrage, which has been built across the Nile at Assuan is now ready to begin its work of impounding the waters of the Nile, and the good which will undoubtedly result from this magnificent piece of engineering will go a long ways towards offsetting the misery which the South Arican war has caused to humanity. The administrative genius of the Anglo-Saxon race has never been more brilliantly demonstrated than by the results of the British occupation of Egypt, and though there is still a political fiction of Egypt being a dependent of Constantinople, it is to all intents and purposes as much a British province as India or New Zealand, and the British have certainly proven their right to it by making even the desert to bloom like a garden.

The "Settlement House." II.

BY ALLEN B. POND.

THE Chicago Commons, opened in May, 1894, in scanty quarters in West Erie Street, in the fall of that same year established its lares and penates in a sadly dilapidated but roomy old mansion at No. 140 North Union Street. To this old brick mansion, fallen on evil times, there had previously been added a ramshackle wooden extension of barracks-like character. Here for seven years the Chicago Commons carried on a work conforming closely in methods and range to the settlement norm. In the early summer of 1901 the Commons moved into its new building, plans and photographs of which are reproduced in these articles. To these new quarters, with more comfort for the residents and with greatly increased facilities for work, the Commons has transplanted its former activities unchanged in spirit. But the terms of the leasehold of the new premises prescribe that in any building to be erected thereon, there shall be provided an audience room suitable for religious worship, and that religious services, under the auspices of an organized church, shall be held therein once on each Sabbath and once on one other day of each week. This has resulted in placing the Chicago Commons in the hybrid class of which mention was made in considering the range of activities germane to the settlement idea. The reason for the digression into this piece of otherwise irrelevant history is found in its immediate consequence in materially complicating the planning of the building.

The lot is rectangular, having a north frontage of seventy-six feet on Grand Avenue and a west frontage of one hundred and seventeen feet on Morgan Street. The building could not be of fire-proof construction for financial reasons; and in a building not of fire-proof construction, the municipal ordinances provide that an auditorium seating more than five hundred persons shall be on the first floor. The problem of planning required taking into account, among other things, the following desiderata: The auditorium, by virtue of its independent use for distinctively church purposes, should have its own well-marked appropriate entrance; and, for a safeguard from fire or panic, a subordinate exit and entrance. Other suitably disposed rooms should be available for Sunday-school purposes. The auditorium during much the larger part of the week would be merely an adjunct of the settlement equipment, and should be detachable, but yet not wholly detached, from the remainder of the building. There should be also a separate residential entrance to a part of the building, which should have, if attainable, markedly the aspect of a home, to the end that this less formal approach, and the treatment of the first-story rooms giving directly on it, may offset the somewhat institutional aspect likely to inhere in the auditorium entrance. For the rest, it is desirable to give the men of the neighborhood freedom from constraint in access to their clubrooms; to permit large classes to go to and from the gymnasium with the minimum disturbance of groups occupied in pursuits needing quiet; and, generally speaking, to keep the other activities as closely allied to the home life and spirit as is practicable without a degree of noise or confusion that would defeat the purposes sought. In the solution of the

problem it was found that, after providing the required seating capacity in the auditorium, the smallness of the ground area would leave scant space for the first story of the residential part. The further demand was made that from this scant residue be provided one room of considerable dimensions, that could be shut off on occasion for use of some special group of people. When these requirements had been met, and the inexorable vestibules, staircases, elevator well and office had claimed their share, greatly less space remained than was desired in order to give within the home entrance that appearance of openness and flexibility so desirable in imparting an air of hospitality. To this extent the solution is not successful in the degree sought.

The plans as finally determined on give the following dispositions of space: In the Grand Avenue wing are basement and five stories; in the Morgan Street wing, owing to height of auditorium and gymnasium, are base-

ment and five stories; in the Morgan Street wing, in the basement are clubrooms for men and boys, fire-proof boiler and coal room, and laundry in one-story lean-to; in first story is the auditorium; in the second story are two class or club rooms and the kindergarten with its own cloak and toilet rooms; in the third story are, in north half, women's clubrooms with kitchen (across hall), and, on the side hall, two chambers and bath for men in residence, and, in south half, manual training, lockers and showers; in fifth story are, in north half, five bedrooms for men in residence, with bath room, and in south half, the gymnasium. In the second story of Morgan Street wing, which is also used for Sunday-school purposes, is one room (northeast corner) devoted in part to kindergarten uses and in part to storage of Sunday-school and sewing-school apparatus. Access to the gymnasium is had only by stairs from the locker room, to



FRONT ELEVATION, "CHICAGO COMMONS."

ment and but four stories. In the Grand Avenue (or residential) wing are an electric elevator and residents' staircase from basement to fifth floor; in same wing, contiguous to the Morgan Street (or auditorium) wing, is a public staircase from basement to third floor, accessible in basement and first stories from outside public entrances and from the residents' wing, in second and third stories communicating only with Morgan Street wing; at extreme south of Morgan Street wing is a staircase from auxiliary street entrance to third floor, accessible from first, second and third stories.

In the Grand Avenue wing, in the basement are cooking-school, cold storage, general toilet rooms for men and for women, elevator machinery; in the first story are reception room, drawing-room and office; in the second story are residents' parlor, dining and serving rooms and kitchen; in third story, for the "warden" or head resident (a married man with family), a flat containing parlor, library, three bedrooms and bath room; in fourth story, seven rooms for women in residence, with bath and

which access is commonly had by the south auxiliary stairs, but which may be reached from the main public stairs via the women's club corridor. Usual access to kindergarten and (temporary) manual-training classes is also by south stairs, with possible access via main public stairs. The office, although subordinated, is readily accessible from either the residential reception hall or from the hall of main public staircase, to both of which it is immediately contiguous.

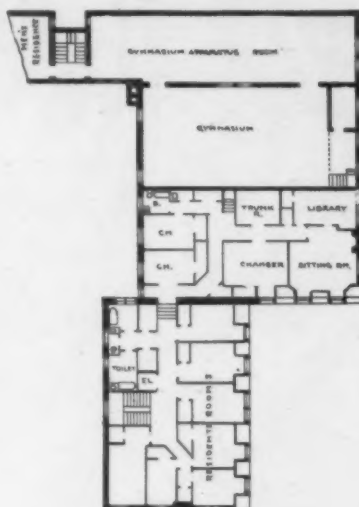
Among the defects in the present equipment are: inadequate facilities in gymnasium locker and shower rooms; apparatus room for gymnasium; inadequate space for manual-training work; unsuitable rooms for men's club; inadequate laundry facilities. After the present building was well under way, the Commons Association secured by purchase a narrow strip of land twenty feet by one hundred and sixteen feet adjoining the present building on the south. In a building to be built thereon it is proposed to place: on ground floor (front) a bowling alley and corridor; in first story (front) a clubroom at level of

auditorium stage and capable of being opened into auditorium full width of stage; in second and third stories (front) men's and boys' clubs with toilet rooms; in fourth story (front) gymnasium apparatus room opening into present gymnasium by wire doors and panels; in basement and first story (rear) a laundry; in rear above first story, apartments for men in residence. This will set free the entire south half of Morgan Street fourth floor for locker and shower rooms (see plan), the entire Morgan

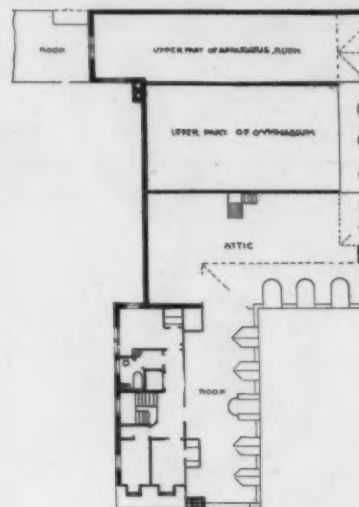
IGNORANCE or carelessness is responsible for much destruction of art terra-cotta when the latter is being put into buildings. If the sculptor has carved a panel in tough granite and it is being put into place, it is almost wrapped in wadding during the process, and is carefully guarded until the building is being cleaned down. We do not often see this great care exercised over terra-cotta work. It is no uncommon thing to see small projecting pieces in an elaborate ornament broken off before the



THIRD FLOOR PLAN



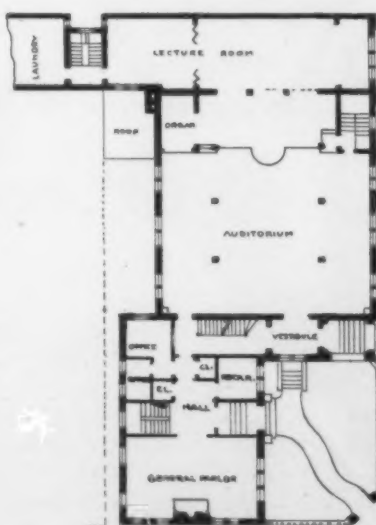
FOURTH FLOOR PLAN



FIFTH FLOOR PLAN



BASEMENT PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

PLANS, "CHICAGO COMMONS."

Street basement (except boiler room) for manual training, the present temporary laundry for its intended purpose — machinery and engineer's workshop, and will give increased accommodations for women in residence in Grand Avenue wing. The plant thus completed will be fairly adequate for carrying on those activities that are in America already recognized as closely germane to the ideal of settlement life and work.

building is finished. Minor ornament is often sculptured in freestone, such as Bath or Portland, after the roof of the building is on and the face is being cleared. As this is impossible with terra-cotta the latter should be specially guarded. We make these observations, as only a few days since we saw some very good terra-cotta work being patched up. Such a procedure does credit neither to the maker nor to the architect. — *The British Brickbuilder*.



DETAIL OF ENTRANCE.



"CHICAGO COMMONS," CHICAGO, ILL.
Pond & Pond, Architects.



WOMAN'S CLUBROOMS.



MEN'S CLUBROOM.



KINDERGARTEN DETAIL.



KINDERGARTEN ROOM.



NEIGHBORHOOD PARLOR.



WARDEN'S PARLOR AND STUDY.



AUDITORIUM.



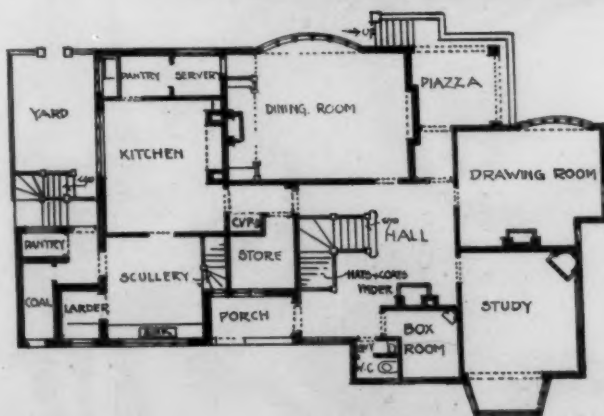
RESIDENTS' DINING-ROOM.

INTERIORS "CHICAGO COMMONS."

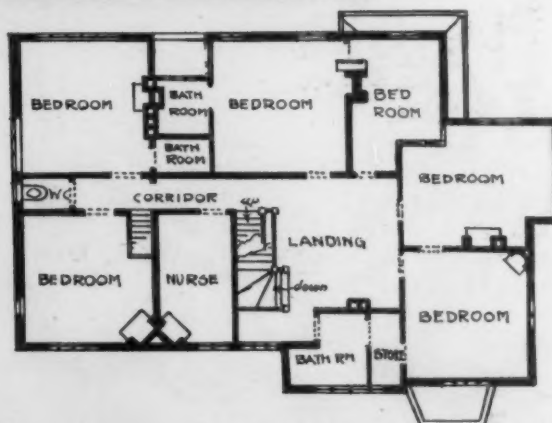
Architectural and Building Practice in Great Britain.

BY OUR SPECIAL REPRESENTATIVE.

"WHAT is the finest sight in the world? A coronation. What do people talk most about? A coronation." So wrote Horace Walpole in his foolish house at Strawberry Hill in 1761, that specimen of gingerbread Gothic with pie-crust battlements. But the divine gossip's words had a bitter meaning, for, speaking of George the Third's coronation, he adds: "A trial of a peer, though by no means so sumptuous, is a preferable sight, for the latter is interesting. At a coronation one sees the peerage as exalted as they like to be, and at a trial as much humbled as a plebeian wishes them." Those may have been Walpole's sentiments—and he was a wag with the best of them—but they are certainly not those of the British public to-day, and no greater grief at the postpone-



GROUND PLAN.



FIRST FLOOR PLAN.

HOUSE AT KENILWORTH, WARWICKSHIRE, ENGLAND.
Buckland & Haywood-Farmer, Architects.

ment of King Edward's coronation was felt than among the "plebeians."

On art and architecture in London the preparations for the great event have had little effect. The majority of the schemes of decoration were garish, in some cases bulky, but not effective. Westminster Bridge, however, must be counted an exception, for there a very notable scheme was carried out by the students of the Royal College of Art Modeling School under the direction of their

eminent professor, Lantieri. This scheme, for which the London County Council voted £750, was perhaps the best of its kind carried out in this country for many years. Of the many other schemes there is no necessity to speak, though one proposal is perhaps worth noting—that for lighting up St. Paul's Cathedral at night by arranging fifty or eighty searchlights in the surrounding buildings.

It is opportune to mention that among the coronation honors was Mr. William Emerson's, now Sir William Emerson, the retiring president of the Royal Institute of British Architects. There are other architects who have done more for architecture, but it is certainly gratifying to see the profession thus recognized. There are now two "Sirs" among the architects, the other being Sir Thomas

Drew, an Irishman.

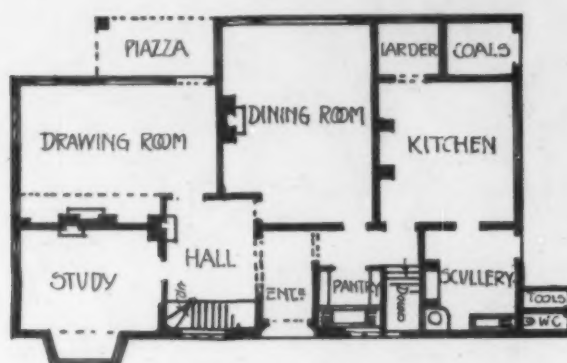
Since the publication of my last letter in THE BRICKBUILDER the Royal Academy exhibition has opened and closed. The architectural room contained no great design, but the domestic work was, as a whole, very satisfactory, its general feeling being one of

simplicity and thoroughness. Among the ordinary run of people, plainness, *i. e.*, non-ornamentation, is synonymous with ugliness, and consequently when they see a piece of unadorned brickwork, however good it may be, it displeases them and they hanker after fripperies. But to the man with a love of the genuine there can be no such disparagement, and it is gratifying to see that English architects are producing a type of country house which, while in every way conforming to modern require-

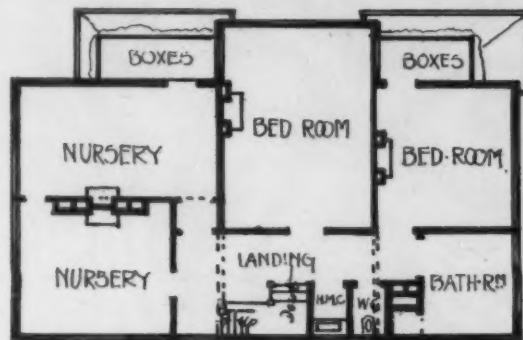
ments, is thoroughly quiet withal. On the outskirts of our towns we see the speculative builder's brick boxes with slate lids defacing the fair fields; houses proper they are not fit to be called, for they are neither good to live in nor to look at. They are built at the very lowest possible cost, and yet one finds them all bespattered

Among the Academy exhibits there were many examples of this. To enumerate them would, however, be of little interest to American readers, which is the reason why I have generalized and not particularized.

In my last letter I referred at some length to the bricklaying question and its relation to trade unionism.



GROUND PLAN.



FIRST FLOOR PLAN.

HOUSE AT EDGBASTON, ENGLAND.

with paltry carved door and window heads, with inane finials on the roof and foolish panels in the walls, all useless and worse than useless additions to the expense. And even among those "most desirable residences" of villadom, where the middle class live, the taste is no better. To ascribe the blame is neither a sure nor a productive occupation, for each person considers himself in the right, and fashion suggests fashion; but there can surely be no better guide than fitness. A good brick, for instance, should be sound and of a pleasing texture and color. Allow it to remain and it will be satisfactory; but tinker with it, paint it or scratch it, with the idea of improving its appearance, and it loses its charm immediately.

It is the same throughout the whole of architecture. Truth and fitness are essential to lasting beauty. So that, looked at from this standpoint, it is satisfactory to see the better domestic architecture now produced in this country leaving those false mimicries of palaces and mansions and substituting a simpler, more homely and truer basis of design.

HOUSES AT CHELSEA, LONDON, S. W.
Balfour & Turner, Architects.

I may now put a new question, which has been answered by a town councilor of Taunton. It is: "How many bricks can be laid per day per master builder?" This councilor is building some houses on the Somersetshire coast, and at six o'clock one morning he started to lay one thousand bricks, having a friend to carry materials and so to represent the unskilled laborer. The two men took an hour for breakfast and had another fifteen minutes at eleven o'clock for a hasty lunch. The last brick was laid at a quarter past two, so that the work was finished in seven hours. I do not say the councilor's day was a better one than the average British bricklayer's with his four hundred bricks. I only institute a comparison.

Two important schemes have recently had renewed attention

given to them — the first that of the competition for the buildings at the Strand end of the new street now being formed from Holborn, the second that of the Liverpool Cathedral (this on account of the sending in of designs). As to the former there is no more to say than



GARDEN FRONT.



HOUSE AT EDGBASTON, ENGLAND.
Buckland & Haywood-Farmer, Architects.

that the Council's competition was a fiasco and resulted in nothing more than eight architects receiving £250 each for submitting designs. As to Liverpool Cathedral, Mr. Shaw and Mr. Bodley, the two architects appointed by the committee, after much harassing, to act as profes-



NEW POLICE STATION, LONDON.
J. Dixon Butler, Architect.

sional advisers, are busy with the portfolios and sets of designs sent in. There are one hundred and two sets, seventeen from abroad and eighty-five from Great Britain. From amongst them a selection will be made of three, and the authors will be requested to submit designs for the cathedral itself and will be paid for their work whatever happens. The purchase price of the site (St. James's Mount) has been fixed at £10,000.

In London building operations are being extensively carried out. The new offices for the Prudential Assurance Company are being completed according to Mr. Alfred Waterhouse's designs, in red terra-cotta, and close by the immense block of the Birkbeck Bank has been finished, a monstrous structure in glazed tile work; the color is pleasing, but the decoration is more adapted to a wedding cake. In the Strand the new front of the Cecil Hotel has been built in brick and stone, but this is also devoid of merit. Outside London the new schools at Horsham have been opened for the Bluecoat boys,—a fine work by Mr. Aston Webb, A. R. A., and Mr. E. Ingress Bell. It is perhaps interesting to note that in the construction of these schools the following quantities of materials have been used: 20,000,000 bricks, 1,500,000 tiles, 31,000 tons of sand, 5,000 tons of cement, 15,000 tons of shingle, 5,000 tons of coke breeze, 21,000 yards of wood-block flooring (equivalent to five acres) and 100,000 cubic feet of Bath, Portland and York stone, in addition to which there are forty miles of hot-water pipes and ninety-eight miles of electric wires.

The British Fire Prevention Committee have continued their tests and have latterly devoted attention to jarrah and karri woods. Two tests of doors of these woods have been carried out by them. The first was with 1¾-inch doors having solid panels, and the result of an hour's fire was the burning of holes through the joints and rails of both. In the second test 2-inch four-panel doors were tried. At the end of the hour the jarrah door was still

standing, though the slamming stile was burnt through in two places, much bulged and the joints open, but the door and frame of the karri were practically destroyed. Another test was with a jarrah floor. At the end of two hours there were numerous holes in it, and the post, beams and joists were reduced in size and charred to a depth of ¾ inch. As Mr. Max Clarke observes, there is a great difference of opinion among experts as to whether fire-resisting construction should be really "fire-resisting" or "slow-burning"; and it is to this task, among others, that the committee devotes itself.

A new process for the production of facing bricks has been adopted at Peterborough by which they can be turned out nearly as easily as the common Fletton brick, thus increasing their value from fifteen shillings (about four dollars) to thirty-five shillings and up to forty-five shillings per thousand. Under the old system yards making facing bricks could never be sure of the quantity which would come from the kiln fit for outside work, the average perhaps being only fifty per cent; but by the new process it is claimed that ninety-nine per cent can be turned out in any yard where the clay will burn red inside. The importance of the invention will be appreciated when it is stated that the output of the Fletton brick fields last year was about 500,000,000 bricks, of which 400,000,000 were used in London and district,



BATTERSEA BRIDGE DWELLINGS, LONDON.

where the brick is preferred to the old Kent stock. For the new War Office in Whitehall 25,000,000 Fletton bricks have been ordered for inside work.

In conclusion I may briefly refer to the accompanying illustrations. The new police station by Mr. J. Dixon Butler, F. R. I. B. A., is in Cannon Row, just opposite Mr. Norman Shaw's "New Scotland Yard," with which building it harmonizes, similar materials (red brick and Portland stone) being used in both. It is the largest station in the Metropolitan Police District.

The houses off the Chelsea embankment by Messrs. Balfour & Turner, it will be noticed, are treated exceedingly plainly, though boldly. The heavy cornice with stout corbels adds greatly to the design. At first sight

one might not suppose the Battersea Bridge buildings to be working-class tenements. They are, however, similar to those on the Millbank estate and the Boundary Street area in the East End of London, and certainly reflect great credit on the Architect's Department of the Council.

Mr. Buckland's houses in brick and rough-cast speak



POWER STATION, "FERRY WORKS."

for themselves, and the plans show the accommodation provided. The house at Edgbaston, Birmingham, was built for the architect himself, and its roof is covered with brindled tiles. It is a comfortable abode in winter,

large lights high up in the walls, and the battered piers express the constructive needs of the walls, which give lateral support to a large area of light-glazed roofing supported on cast-iron stanchions, and also support girders on which the traveling cranes run. The battered piers also enabled the footings to be reduced, as they spread the weight. The nature of the ground was such that it was necessary to keep the foundations near the surface. The bottom of the concrete foundations is less than two feet from the surface under the walls and only four feet under the tower. The latter is attached to the power station and contains hydraulic accumulators giving a pressure of two tons to the square inch. The centers of the large piers are filled with concrete up to the level of the plinth course. The building is faced with purple brindled bricks made from the fire-clay measures occurring locally in coal mines. The whole of the door jambs, strings and copings are made from the same clay burnt hard and having a vitrified surface.

REPORTS have appeared in the papers concerning a machine which has been devised by some ingenious mechanic in Canada which will lay brick at the rate of four to six hundred per hour and is worked by two men and a boy. The machine even accommodates itself with a slight lessening of speed to corners and openings. It claims to be adapted to any kind of work where plain walls are required without too much break in the surface. If the machine can be depended upon to properly bond the work and to thoroughly fill all the joints with mortar it might be a great relief to the mind of the architect and superintendent, but we remain somewhat skeptical of its value for anything except the commonest kind of work, and even there would question whether it could seriously compete with the kind of labor which is usually employed for such work.

It is, however, an interesting attempt. We now manufacture our bricks by machinery, handle them mechan-



"FERRY WORKS" AT QUEENSFERRY, FLINTSHIRE.
Bulkeley Creswell, Architect.

as all the flues are on the inside walls and thus help to keep it warm.

The "Ferry Works" at Queensferry, Flintshire, were designed by Mr. Bulkeley Creswell and have been laid out for the manufacture of Niclausse water-tube boilers. The form of the building was indicated by the necessity for

ically from the machine to the dry house, from the dry house to the kiln, from the kiln to the boat or car, and the bricklaying machine is another step in the substitution for hand labor. We do not fancy, however, that bricklayers as a trade will need to yet be specially alarmed by the appearance of the alleged bricklaying machine.

Fire-proofing.

THE DESIGNING OF BUILDINGS WITH REFERENCE TO INSURANCE REQUIREMENTS.

THE recent action of the Massachusetts Institute of Technology in establishing a department of insurance engineering is the first attempt which has been made toward establishing on a rational basis the essential requirements for fire-proof construction and all that pertains thereto in fire prevention and retardation.

One reason perhaps for the general lack of knowledge and the incredulity with which many of the tests which have been made have been received, is due to the fact that they were made by or under the auspices of the parties interested and oftentimes moreover with little attempt at getting at the fundamental facts underlying the method of the manufacture of the materials tested.

The honest seeker for information as to the best way of designing a building with due regard for economy and non-combustibility or fire-resisting qualities, is in some respects greatly at a loss as to how to advise his client to spend his money to the best advantage.

On the one hand the insurance companies have framed a schedule of rates and penalties which has been written no doubt with the idea of keeping themselves safe at any cost, and it is reasonable to suppose that in framing their schedules they were acting on the best information obtainable, and that in general these ratings were intended to be fair and proper; but in the domain of insurance schedules and rating there is an immense amount of information yet to be obtained on the behavior of non-combustible and fire-resisting materials under the action of fire, and this service of obtaining such information bids fair to be well performed under the impartial action of an institution devoted to the ascertainment of fact and the elimination of error.

And if this work is carried on under the care of men of experience, it will prove of great benefit to the public, the insurance companies and the architects.

Under such auspices the determination of facts ordinarily not otherwise ascertainable can be undertaken and the result published with the certainty of having respectful attention paid to them.

It seems like a work of supererogation to detail here the enormous losses by fire which almost every daily paper chronicles, and the scant attention paid to these evidences of waste by the readers shows how imperfectly the public realizes the facts underlying the causes of this waste.

If it were possible to apply the communistic idea to the matter of fire waste, then each man could realize that the waste of the substance of the community was also the waste of his substance as one of the parties of the community, but where each man regards his property as his own, and his neighbor's as a thing apart, it is impossible to make him take any other than a shortsighted, selfish view of the situation.

With increasing knowledge of the possibilities of fire prevention made possible and public by an institution of learning and reputation, it is to be hoped that the rising

generation may find the problem of fire prevention not such a hard one as it is now supposed to be, because ignorance will have given way to knowledge and prejudice to reason.

It is through the insurance companies, however, that the first signs of the new education will become apparent, and through them the owners of buildings will be brought to treat with respect the new order of ratings made possible through increased knowledge, when the present arbitrary methods of classification and penalties arising largely from the results of unanalyzed practical experience shall have been brushed aside with the passing of the old order of things.

If an unprejudiced observer will carefully study the universal schedule or in fact any other schedule of rates, he will begin to wonder why the schedules on many items were made; for if a method of construction is inferior or bad and the method of construction is at the same time a vital one, he will wonder why the building is insurable at all. Take for illustration the open elevator well. A record of a great number of fires in buildings which reached destructive proportions could be traced to this vital defect; yet the insurance companies merely add a charge of ten cents per \$100 for these vertical flues and fire spreaders, and after this is done the building is supposed and admitted by reason thereof to be as good a risk as a building with enclosed shafts. It takes but little consideration to see that such a method of classification as this lowers the standard of the whole schedule and makes it difficult to make logical men regard it seriously. If a thing is bad it is bad, and merely adding a handicap does not raise it to the level of a good thing.

If life insurance companies treated their risks in the same way fire insurance companies do, a man with an incurable disease likely to terminate his life at any time under certain conditions, such as an incurable consumption, would be regarded as quite as good a risk as a thoroughly sound man, upon the payment of a larger premium than a sound man would be required to pay. If the fire insurance schedule is viewed in the same light as the life insurance schedule, the method of rating fire risks is seen to be not only totally illogical but also unfair to its patrons. A life insurance company doing business on the same principles would soon be regarded with distrust; and if by good luck it escaped failure, the number of bad risks on its books would retard its growth if the facts regarding its condition were known. Yet the fire insurance companies will insure any risk, and when the inevitable loss results sooner or later, reimburse themselves by raising the premium on the unburnt property.

If the insurance schedules were properly and intelligently made up, and made so that their charges commanded the respect of the thinking part of the community, it would not be long before owners in self-protection would insist upon their architects observing the requirements of the schedules; for after all if a thing has to be done in a certain way or a certain construction followed out it is the designer's business to so treat it that it will not be an eyesore, but rather as a utility treated with due recognition as a utility and at the same time treated with some regard to architectural fitness.

A second illustration may be drawn from the rating

on open stairways—the schedule charge is five cents per \$100. The open stairway is not quite so serious a defect from a fire-retarding standpoint as the open elevator shaft, yet it is serious enough to warrant a more prohibitive charge than the schedule imposes. And it is hardly reasonable to say that by adding the charge of five cents the building is then as good as one with enclosed stairways, and as good a risk from the fire insurance standpoint.

The spreading of fire from floor to floor of any building can be prevented only by making the floors without openings or enclosing the necessary openings by fire-proof division walls. Stairways can be enclosed as readily as elevator shafts if their design is studied out with care, and the necessity of such treatment is admitted.

Some of the newest department stores in New York City show that where this necessity is recognized, means can be found not only to meet this necessity but to meet it without sacrificing any æsthetic requirement.

The treatment of an enclosed stairway is not by any means a difficult problem or one that even an ordinary designer should make objection to. "Wire glass," a fire-resisting medium, can be made in plate glass with a highly polished surface, and with the wire encased in it lends itself to a decorative treatment. Metal-covered doors can be treated with due regard to their emergency function and yet be made not unattractive. Metal frames for supporting the hollow tile filling and the wire plate glass, properly covered with fire-proof material, can be treated without difficulty.

The whole matter of meeting the insurance schedules resolves itself into, *first*, making the schedules reasonable and logical, making bad construction and bad planning uninsurable, and *second*, making the recognition of such reasonable schedules part of the specification for the design of a building. Under this very reasonable requirement losses by fire would soon be reduced to a minimum and good design would become the rule, to the benefit of all concerned.

If such a state of affairs can be brought about through universities taking up the study of insurance engineering, much good must result to the community. And if a word of warning must be uttered, it is that the study shall be pursued on a broad basis—not simply with the one idea of making a building non-combustible without regard to any other consideration, but with the clear understanding that many things have to be dealt with to meet the requirements of various businesses, and if the studies are to prove of value all this must be borne in mind.



SMALL BRICK COTTAGES, NASHVILLE, TENN.
Robert Sharp, Architect.

Selected Miscellany.

NOTES FROM NEW YORK.

A STRANGER in New York would doubtless be impressed and surprised at the unusual activity in building operations which is apparent on every hand, and which is truly remarkable, especially during the hot summer months and at a time when building materials are high and building is an expensive luxury. I cannot recall any summer when there has been so much activity in the down-town district. The new Hanover Bank



DETAIL BY FRED GRAF, ARCHITECT,
Northwestern Terra-Cotta Company, Makers.

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DETAIL BY GEORGE KRAMER THOMPSON, ARCHITECT.
New York Architectural Terra-Cotta Company, Makers.

building, corner of Nassau and Pine streets, is nearing completion and is a handsome structure, towering above most of its neighbors. The Chamber of Commerce is almost completed, and the Custom House is slowly but



DETAIL BY MEADE & GARFIELD, ARCHITECTS.
Atlantic Terra-Cotta Company, Makers.

surely showing itself above ground. There are several office buildings under way on Broadway and the neighboring streets.

The city is terribly cut up at present by the ugly excavations for the subway, but the work is progressing

favorably, and we can feel sure that the city will not suffer artistically by reason of this work, in fact there are certain improvements which will naturally develop. The City Hall Park, which will be the terminal of the subway, will be cleared of all unnecessary buildings and made a better park than at present. The old Hall of Records is now being removed, for which we should be thankful. There has been some opposition to this from some people who have an absurd idea that there is something about the looks and associations of the building which warrants its preservation. Its present appearance is entirely uninteresting and it dates from one of the worst periods of American architecture. By its removal a splendid view will be obtained of the new Hall of Records on Chambers Street, a splendid monument to the memory of the late John R. Thomas. Fortunately, also, there is a good chance that another fatal obstruction will be removed, viz., the train shed at the bridge terminus. The station of the Manhattan elevated road will remain, but it will not be conspicuous.

Mr. John M. Carrère has purchased the plot at No. 101 East Sixty-fifth Street and will erect thereon a five-story brick and stone apartment house, for which he is now preparing plans. McKim, Mead & White have been selected architects for the new buildings connected with the army department at West Point. A wiser appointment could not have been made, and all true lovers of American architectural development



ST. CHARLES HOTEL, NEW ORLEANS, LA.
Thomas Sully, Architect.
Brick manufactured by Hydraulic-Press Brick Company.

slightly from each brick course. Work laid in this manner simulates to a certain extent the effect of the old brickwork which has stood for generations and from which the mortar has dropped out. The mere imitation of the old work of itself is not necessarily an advantage, but by accentuating the joints, especially if the joints are laid pretty full, the surface of the wall is broken up in such

should rejoice. Surely if we want real American architecture anywhere we want it in our government buildings.

MORTAR JOINTS.

A VERY simple device for very greatly increasing the effectiveness of plain brickwork consists in raking out the mortar from the joints to a depth of half or three quarters of an inch below the surface of the brick, the mortar in the joint being afterward pointed with a special tool which bevels the joint slightly so as to throw the water

slightly from each brick course. Work laid in this manner simulates to a certain extent the effect of the old brickwork which has stood for generations and from which the mortar has dropped out. The mere imitation of the old work of itself is not necessarily an advantage, but by accentuating the joints, especially if the joints are laid pretty full, the surface of the wall is broken up in such manner that it is impossible for it to have a monotonous appearance, each brick casting a sharp, well-defined shadow. Such a method of course would be impracticable for a public building or any large structure, but it lends itself very successfully to a picturesque treatment, and especially when the bricks are laid with the Flemish bond is the effect very satisfactory. The average mason is apt to make his joints too thin and to bring the pointing out beyond the face of the brick or at least make a broad tuck joint which loses itself with the face of the brick and is apt to be character-



BANK AT MOLINE, ILL.
Harry W. Jones, Architect.
Built of Terra-Cotta made by Winkle Terra-Cotta Company.

less. In the early days of the use of pressed brick in this country it was quite the custom, and is still, for that matter, in some cities, to paint the entire surface of the brick wall with red paint matching the color of the brick and afterward line off the joints in black paint. This was about as reprehensible a practice from an artistic standpoint as could be imagined, but where smoothness and a monotonously



HOUSE AT LAKE GENEVA, WIS.
Jarvis Hunt, Architect. Roofed with Ludowici Roofing Tile.

even appearance were desired such procedure was quite to be expected. There is no handsomer surface considered as a wall texture than well-laid brickwork, and especially if the joints are accentuated in the manner just described the surface can be a delight to any one who appreciates artistic effects.



DETAIL BY
E. J. LENNOX, ARCHITECT.
Perth Amboy Terra-Cotta Company, Makers.

TERRA-COTTA AND LANDSCAPE GARDENING.

EVERYBODY knows of the effective use of terra-cotta statues and statuettes in landscape gardening, but few are aware of a further aid to the architectural beauties of a house in the shape of terra-cotta borderings in advantageous positions. We do not mean a

mere plain edging such as may be produced by short tiles. These latter hold their own entirely in that particular field. But we refer to deep-molded borders which stand a foot or so above the surface of the path level. For garden terraces and the like these moldings have been much employed, but they are chiefly, if not always, of cement or stone. These latter are altogether too cold, and the cement certainly does not possess that same finished appearance that well-made terra-cotta does, neither does it harmonize with the lawn or flower plots which it skirts. We are strongly in favor of terra-cotta for the purpose, and the color of that material must, of course, harmonize with the building near by. When the bordering is away from the principal house, however,



DETAIL BY FRANCIS L. ELLINGWOOD, ARCHITECT.
White Brick and Terra-Cotta Company, Makers.

with fifteen charter members, has now a membership of thirty-six. The officers are: A. O. Johnson, president; E. G. Bolles, vice-president; George Wagner, secretary; H. G. Corwin, treasurer.

Edward R. Diggs & Co., Washington, D. C.,

and forms part of a general landscape garden, the tint of the terra-cotta should harmonize with the general surroundings, and it will be found for warmth and varying effects of light and shade that buff terra-cotta is more suitable for that purpose than either red or white stone. There is no

occasion for formal moldings several hundreds of yards in length. A master molding will, of course, find a natural place in a scheme, but it should be broken up here and there by little bays slightly elevated above the general level of the run of moldings, or by the insertion of entablatures of floral patterns, which should not be duplicated. — *The British Brickbuilder*.

IN GENERAL.

Felt & Heim, architects, 51 Ballinger Building, St. Joseph, Mo., have dissolved partnership. J. H. Felt will continue the business at the same address.

The San Francisco Architectural Club, which was organized in September, 1901,



DETAIL BY
BRUCE PRICE, ARCHITECT.
Conkling-Armstrong Terra-Cotta Company, Makers.



ST. MALACHI CHURCH, PHILADELPHIA, PA.
H. D. Dagit, Architect.
Built of "Ironclay" Brick made by Columbus Face Brick Company.
O. W. Ketcham, Philadelphia Agent.

have removed their offices from 1216 G Street to 716 Thirteenth Street, N. W.

The Pioneer Fire-proofing Company of Chicago have closed contracts for the following new work: Tribune Building and Trude Office Building, Chicago, and the Burton Boulevard Bridge, Kansas City.

The New Jersey Terra-Cotta Company, New York City, have furnished the architectural terra-cotta for the following new buildings: Brewery and ice house, Newport News, Va., C. F. Terney, architect; residence, Washington, D. C., Waddy B. Wood, architect; hotel at Atlantic City, N. J., A. W. Barnes, architect; Nelson, Morris & Co.'s warehouse, Philadelphia, E. J. Allsebrooke, ar-



DETAIL BY PARRISH & SCHROEDER, ARCHITECTS.
New Jersey Terra-Cotta Company, Makers.

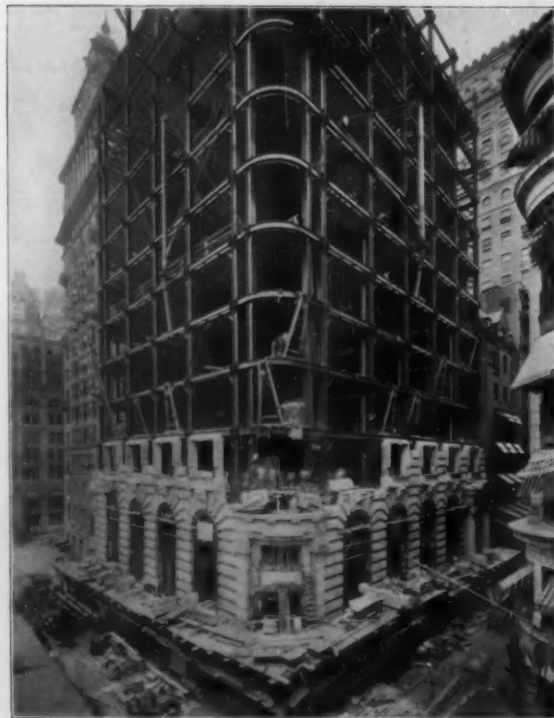
chitect; and these in New York City: Y. M. C. A. Building, West Twenty-third Street, Parrish & Schroeder, architects; improved flats, West Sixty-second Street, Howells & Stokes, architects; ambulance building, Flower Hospital, George



DETAIL BY W. ALBERT SWASEY, ARCHITECT.
St. Louis Terra-Cotta Company, Makers.

E. Teets, architect; warehouse, Nos. 84 and 85 South Street, G. Curtis Gillespie, architect; two apartment houses, West One Hundred and Eighteenth Street, Harde & Short, architects; apartment house, West Fifty-first Street, Charles B. J. Meyers, architect; apartment house, Seventeenth Street, near Irving Place, Sass & Smallheiser, architects; apartment house, Stuyvesant Street, George F. Pelham, architect. They have recently completed large improvements and additions to their plant, which is located at Perth Amboy, N. J.

Blue Ridge enameled brick will be used in the following new work: Power house, Niagara Falls, N. Y.;



HANOVER NATIONAL BANK BUILDING, NASSAU STREET,
NEW YORK CITY.
Fire-proofed by the National ("Raritan") Fire-proofing Company.



FRIENDSHIP SCHOOL, ALLEGHENY, PA.
C. M. Bartberger, Architect.
Brick manufactured by Columbus Brick and Terra-Cotta Company.

addition to Metropolitan Life Insurance Building, New York City, N. LeBrun & Son, architects; Widner Memorial Home, Philadelphia, Pa., Horace Trumbauer, architect;



DETAIL BY GEORGE H. STREETON,
ARCHITECT.
Excelsior Terra-Cotta Company, Makers.

King Edward's Hotel, Toronto, Canada, E. J. Lenox, architect; residence, James A. Burden, Jr., New York City, Warren & Wetmore, architects; residence, J. S. Peters, Islip, Long Island, Harney & Prudy, architects; government buildings, New London, Conn.; residence, S. Gardiner Cassatt, Philadelphia, C. M. Sutton, architect; residence, Col. H. A. DuPont, Winterthur, Del., Perot & Bissell, architects; residence at Glen Cove, Long Island, McKim, Mead & White, architects.

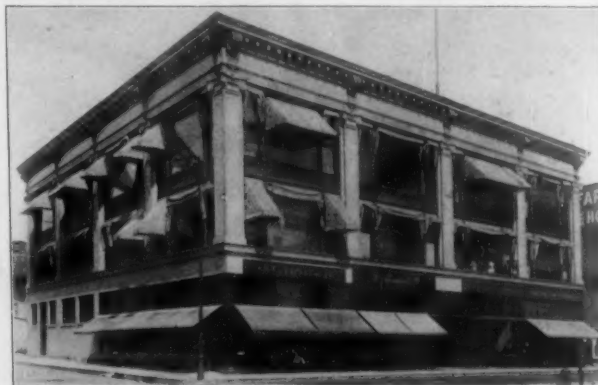


DETAIL BY E. C. & G. C. GARDNER, ARCHITECTS.
Standard Terra-Cotta Works, Makers.

During July the Perth Amboy Terra-Cotta Company closed the following new contracts: Gateway for George J. Gould, Lakewood, N. J., Bruce Price, architect; eight-

teen houses for Clarke estate, West Seventy-fourth Street, New York, N. Y., Percy Griffin, architect; office building, Eleventh Street and University Place, New York, N. Y., Goldwin Starrett, architect; new Lyceum Theatre, Forty-fifth and Forty-sixth streets, east of Broadway, New York, N. Y., Herts & Tallent, architects; hotel, northwest corner Seventieth Street and Amsterdam Avenue, New York, N. Y., H. B. Milliken, architect; American Insurance Company office building, Park Street, Newark, N. J., Cass Gilbert, architect; St. Joseph's School, Convent Station, N. J., George W.

Bowers & Son, architects; Public Library, Middleboro, Mass., F. N. Reed, architect; Tennis and Racquet Club,



STORE BUILDING, ST. PAUL, MINN.
Mark Fitzpatrick, Architect.
Front of Buff Semi-Bright Glazed Brick made by Tiffany Enamelled Brick Company.

Boston, Parker & Thomas, architects; Carnegie Library, Perth Amboy, N. J., Howard Greenley, architect.



POLICE STATION, FORDHAM, NEW YORK CITY.
Hogan & Slattery, Architects.
Brick made by Kreischer Brick Company.

ENGINEERING BRICKWORK.

WE have recently been inspecting some new specimens of engineering brickwork in connection with bridge building. The particular wall, which we may describe as a type of several others on the same large contract, is about twenty feet in height and seven feet in thickness. This is how it was built: A foundation about eight feet in depth of good concrete was first put in; upon this the wall rose. The outside vertical faces were faced with brindles and the interior filled up with common red bricks. So far, so good. But the thickness of the reds was a little less than that of the brindles, consequently in the absence of sufficient infilling concrete there will always be internal strains and stresses of no



DAIRY, HOUSE FOR F. W. VANDERBILT, ESQ.,
HYDE PARK, N. Y.
Alfred Hopkins, Architect.
Finished with Blue Ridge Enamelled Brick.

ordinary character as long as the wall lasts. If these circumstances do not lead to the facing bricks being cracked or forced outwards it will be a marvel. Again, there is considerable difficulty in preserving the regular courses of the bricks in this wall, owing to the fact that one half of the wall has to be built before the other half and the latter half has to be joined to the former. There would of course be no difficulty in joining the two halves together if the thickness of the red were the same as that of the brindles. As it is, the wall has to be much thicker than would be the case were the bonding perfectly true. On the score of using more bricks than need be for simple building construction the clay worker cannot complain; but it is unfair to him to point out, as the engineer will probably do later on, that his bricks are not strong enough for general engineering purposes. Everybody knows that the coefficient of expansion of steel is not the same as that of bricks, no matter of what kind. Engineers are so well aware of this fact that they have for years past allowed for the movement of the girders, as the latter are affected more rapidly by extremes of change in temperature than are bricks. When that movement is not compensated for in some way the brickwork or stonework on which the girders are placed occasionally shows signs of bulging, but more frequently becomes cracked. — *The British Brickbuilder*.



PUBLIC SCHOOL, MADISONVILLE, OHIO.
Samuel Hannaford & Sons, Architects.
Roofed with American S. Tile.

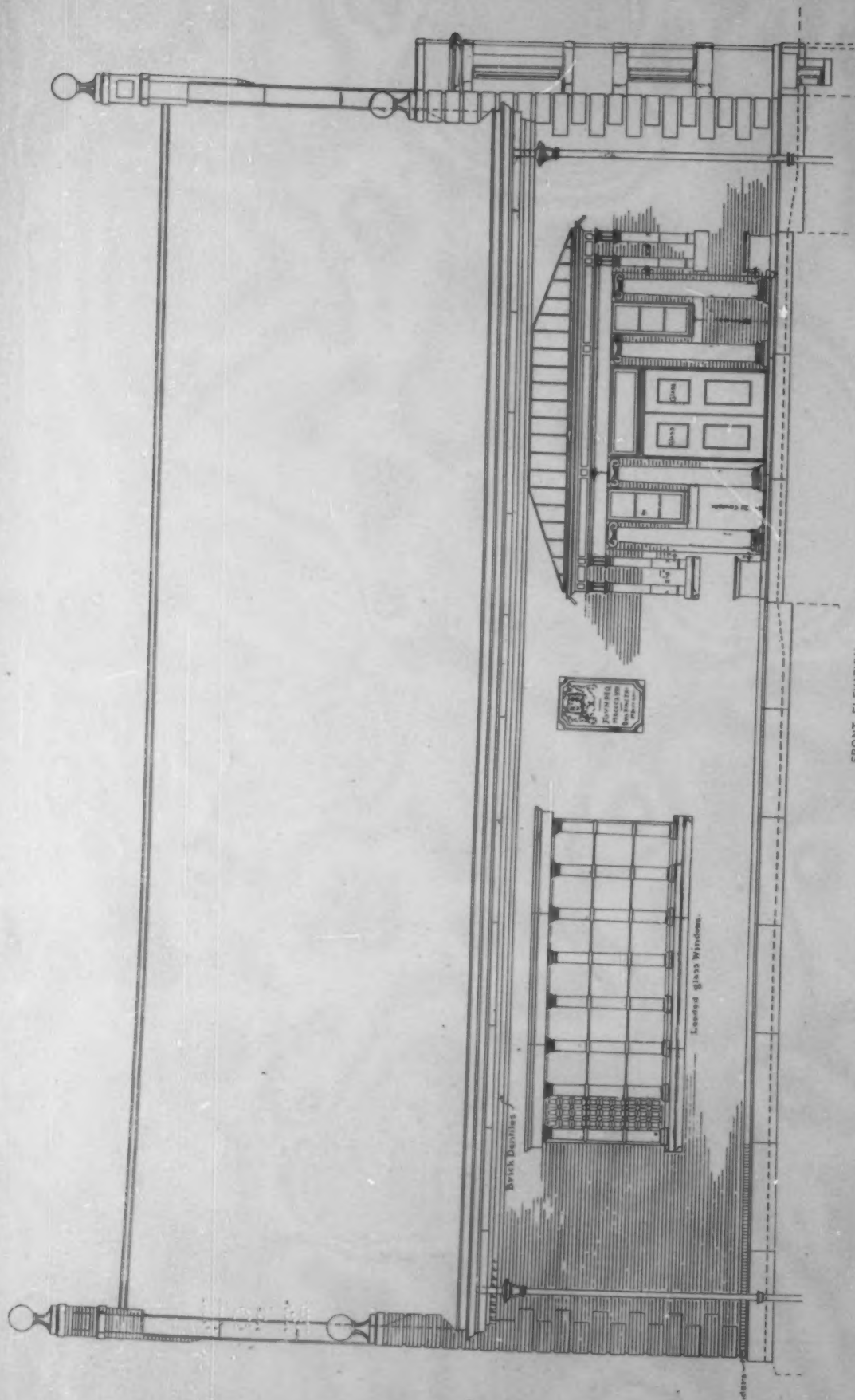
ROMAN MASONRY.

ARCHITECTS have often wondered why Roman masonry has stood so well. Of course only the most durable remains, the jerry-built houses, if there were any in Roman times, having long since disappeared. Some light has recently been thrown on the problem by investigations carried on with some ancient Roman mortar from the palace of Constantine in Trier. The mortar is of an ordinary description; the sand employed consists of partly rounded and sharp flint and chert fragments. The proportion of these latter is about two to one of lime. The chief interest in the investigations, however, lies in the circumstance that they have shown it is in the high-

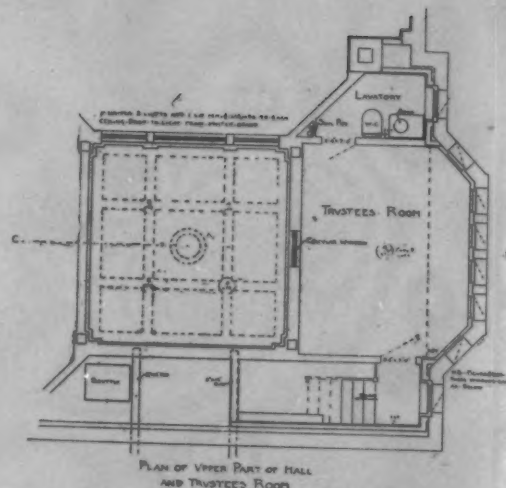


APARTMENTS, NEW YORK CITY.
Brick made by Ohio Mining and Manufacturing Company.

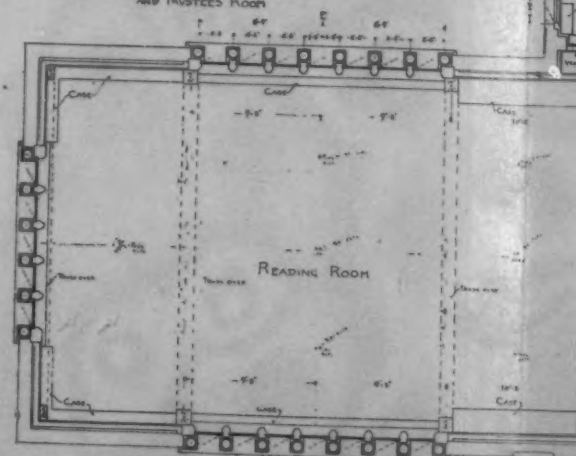
est degree probable that some saccharine material was mixed with the mortar; and following experience gained in India and Siam it is found that a little sugar certainly adds to the durability of mortar and is a good thing all round. — *The British Brickbuilder*.



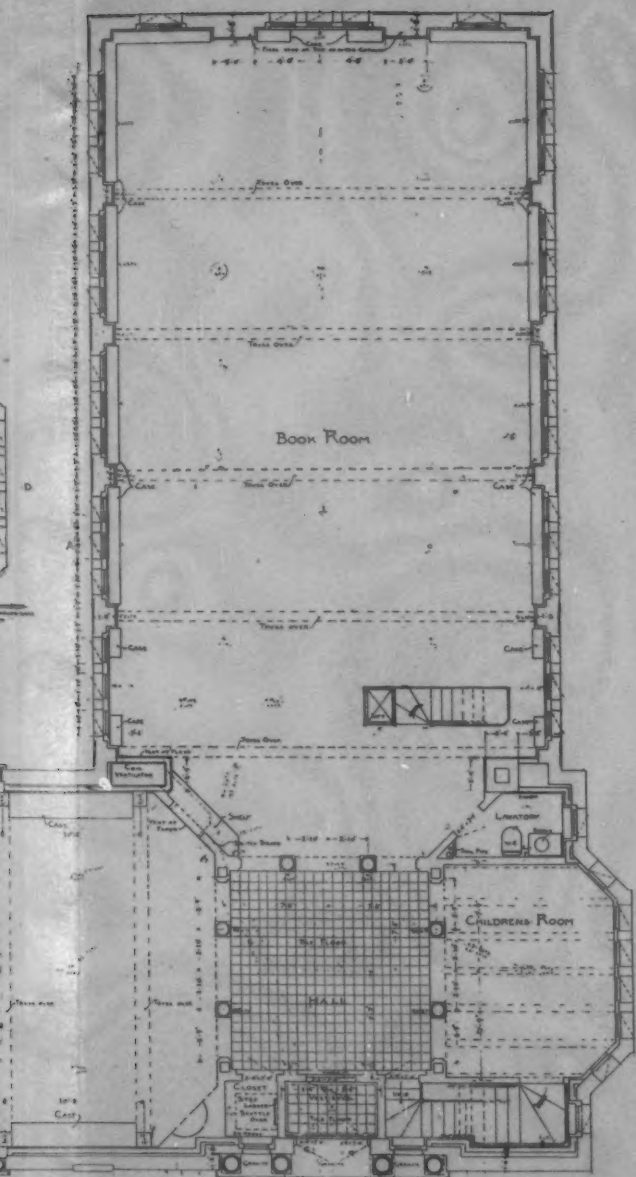
FRONT ELEVATION.



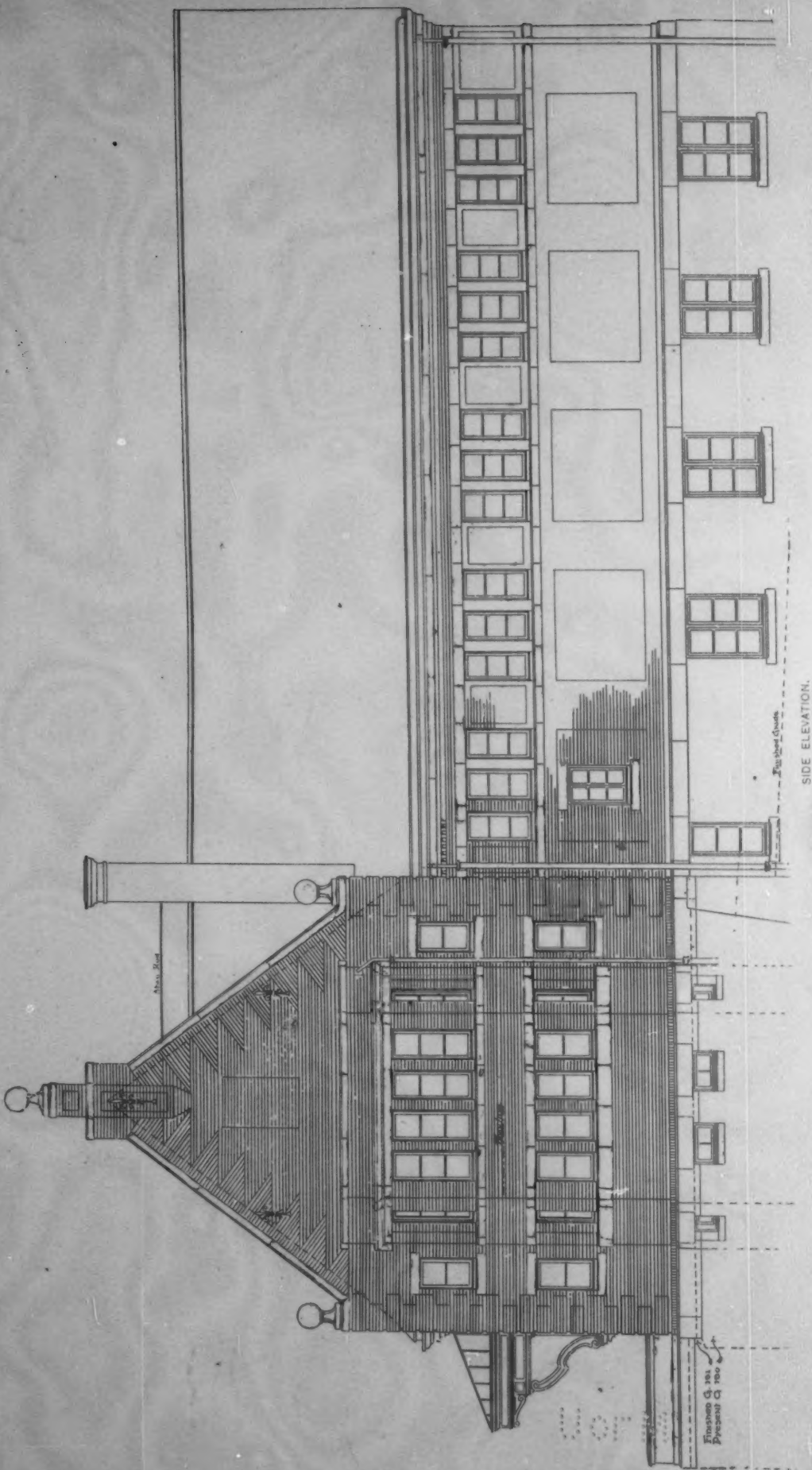
PLAN OF UPPER PART OF HALL AND TRUSTEES ROOM



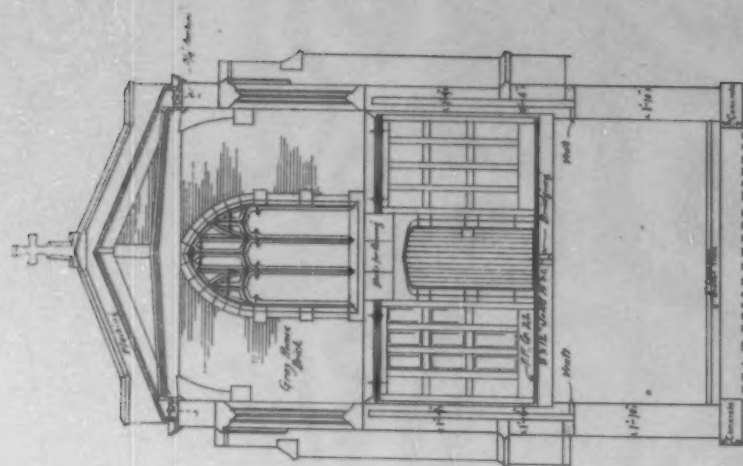
FLOOR PLAN.



FLOOR PLAN.

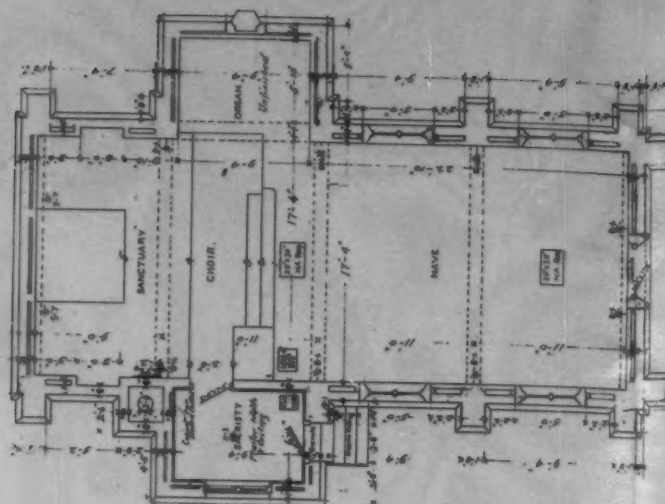


SIDE ELEVATION.

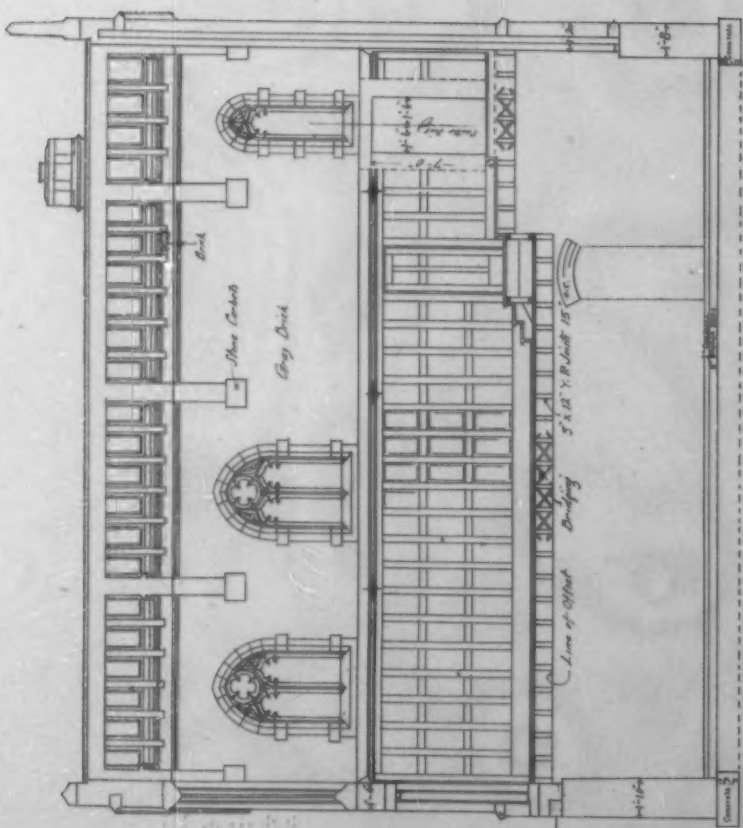


TRANSVERSE SECTION

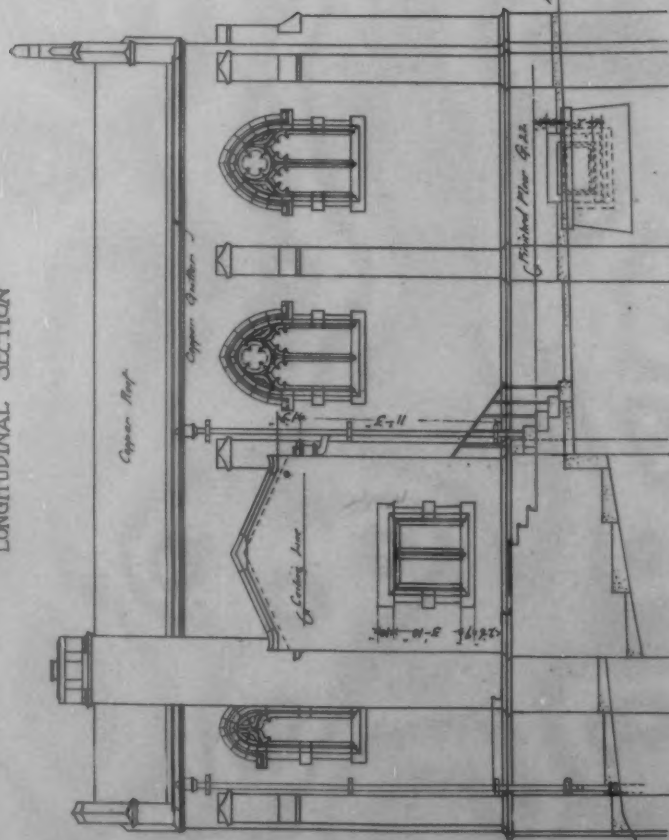
CHAPEL FOR ST. LUKE'S
HOME FOR CONVALESCENTS
ROXBURY BOSTON
Scale $\frac{1}{4}'' = 1'-0''$

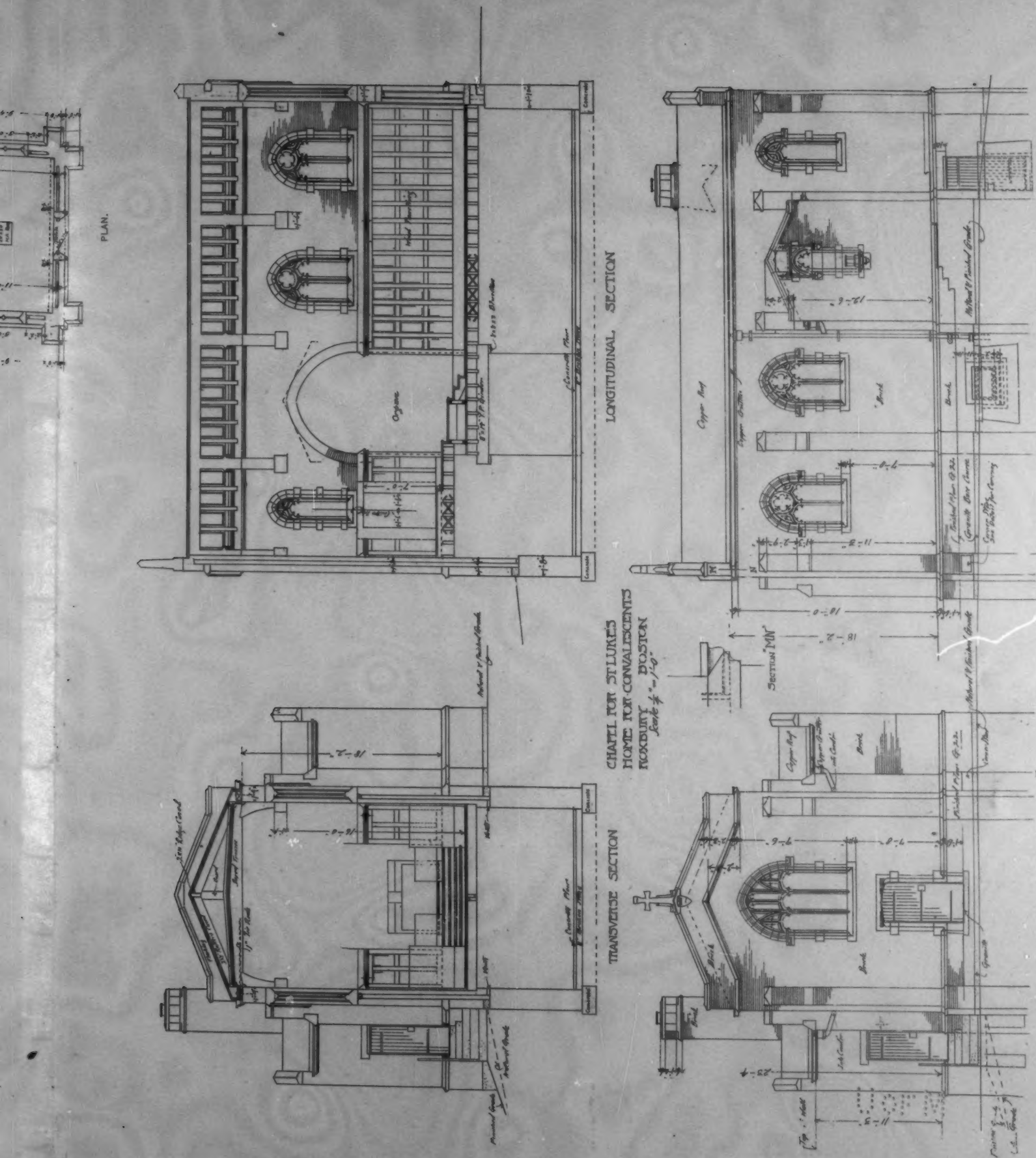


LONGITUDINAL SECTION

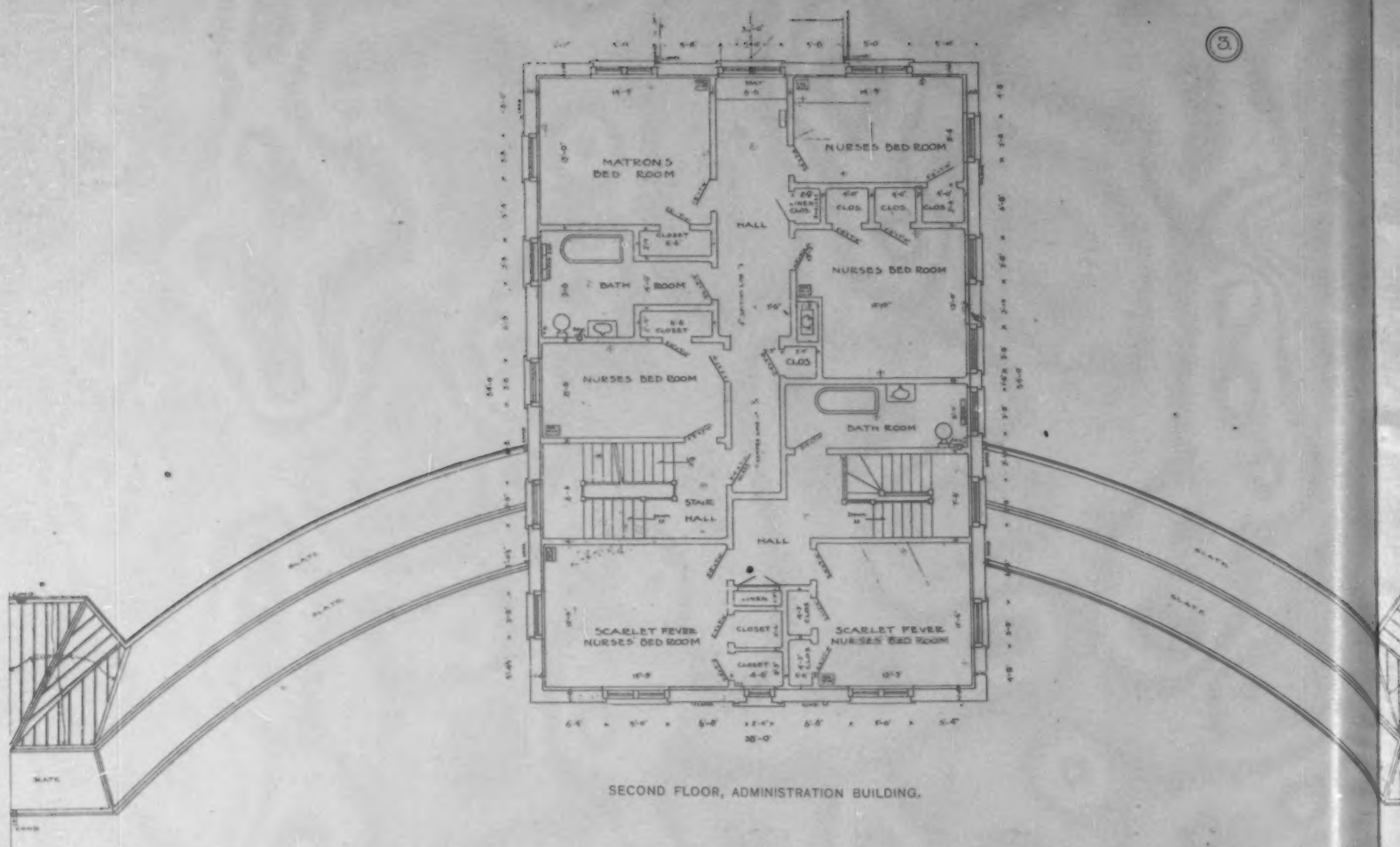


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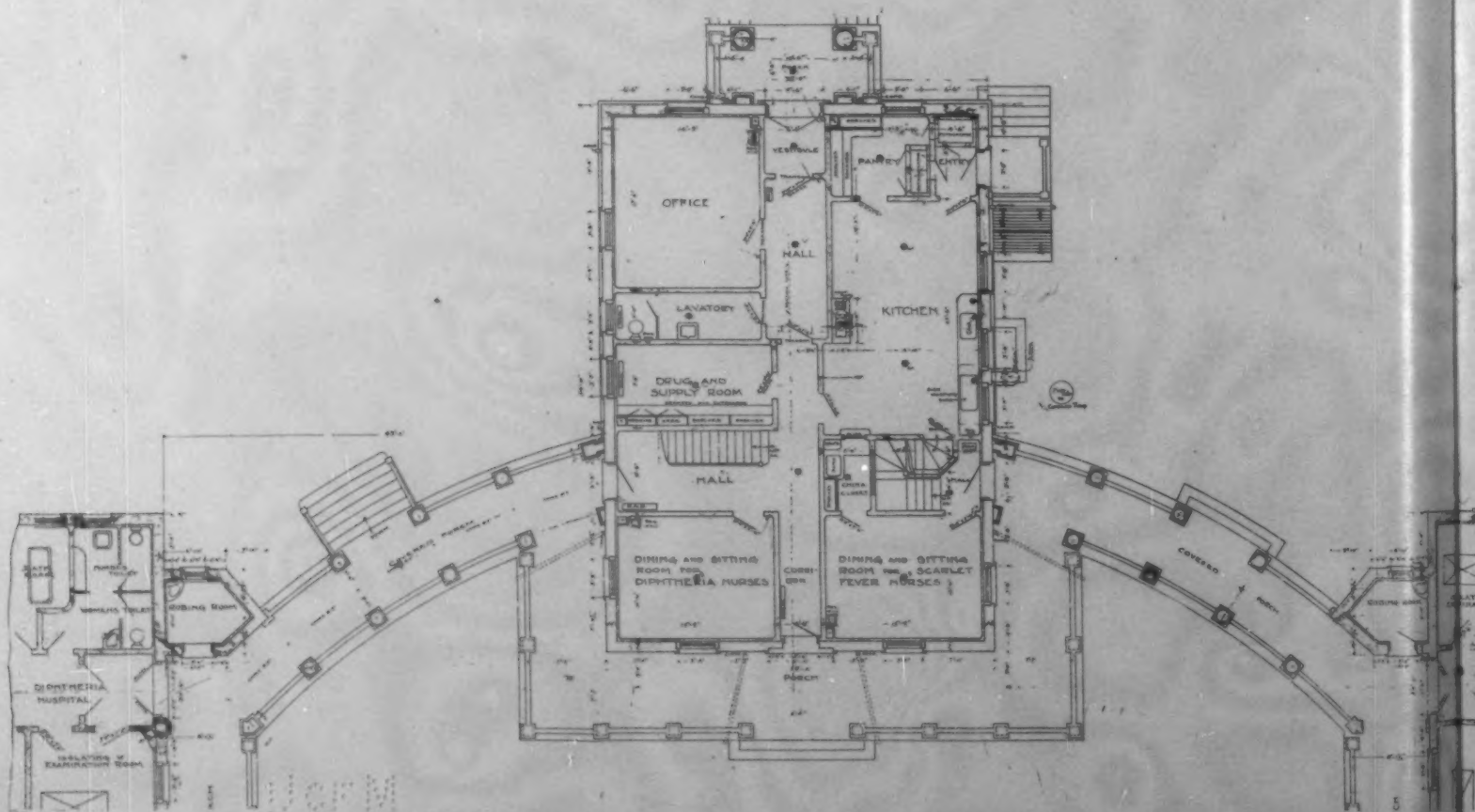




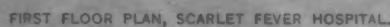
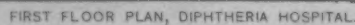
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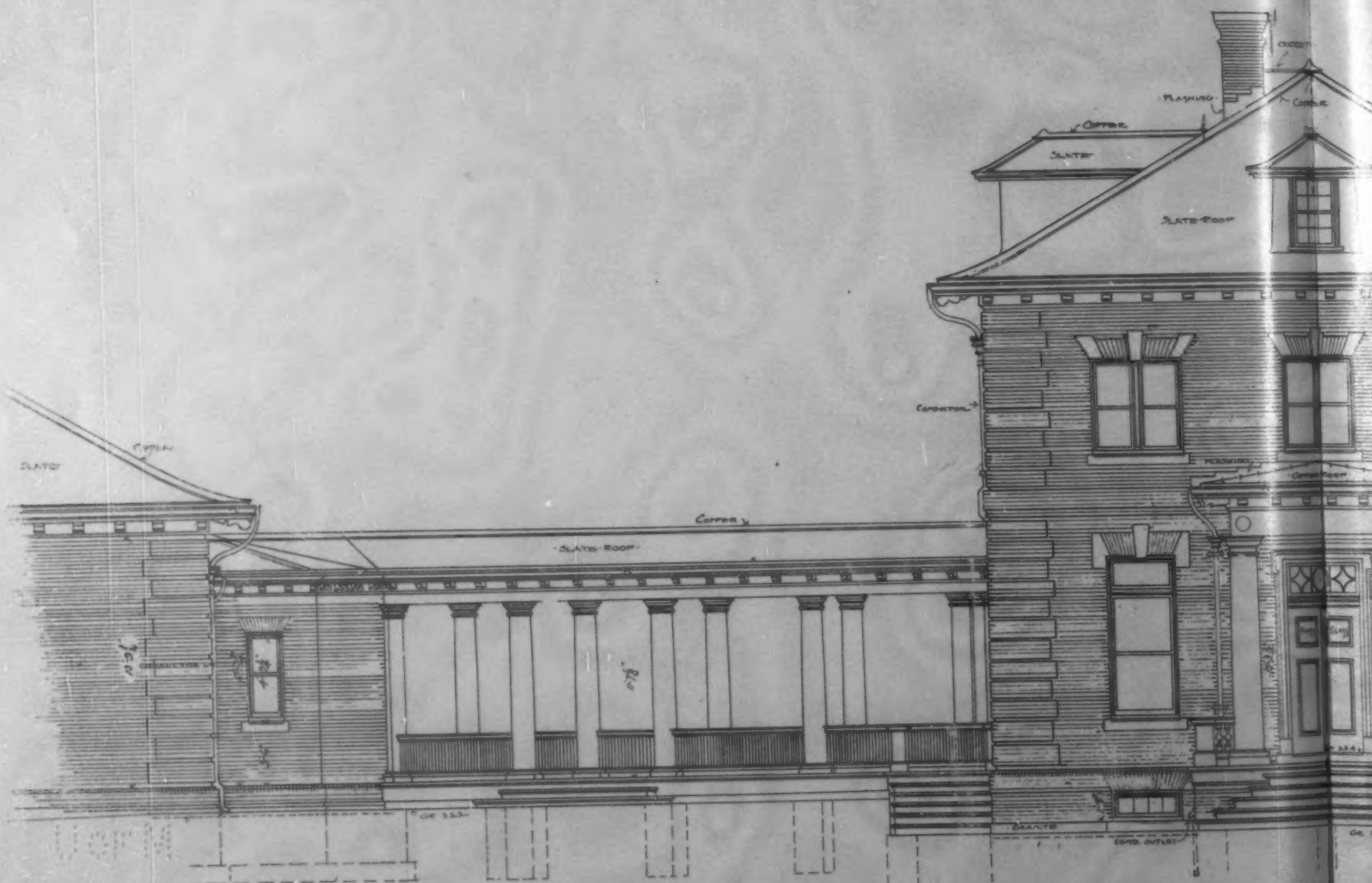
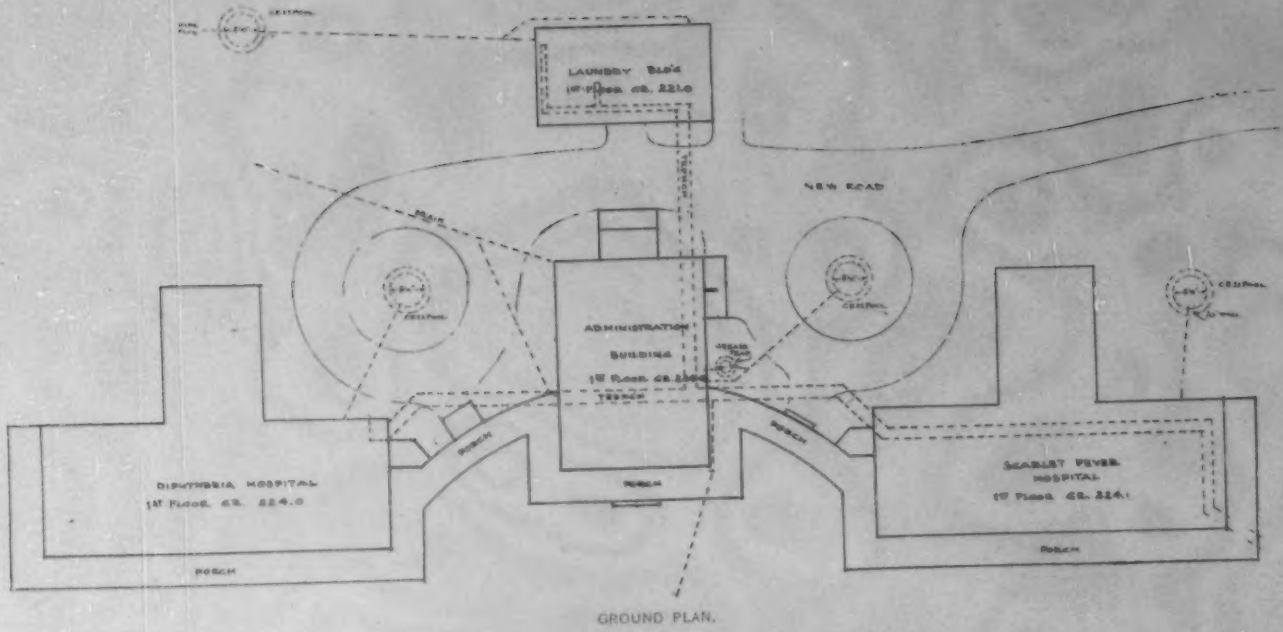


SECOND FLOOR, ADMINISTRATION BUILDING.

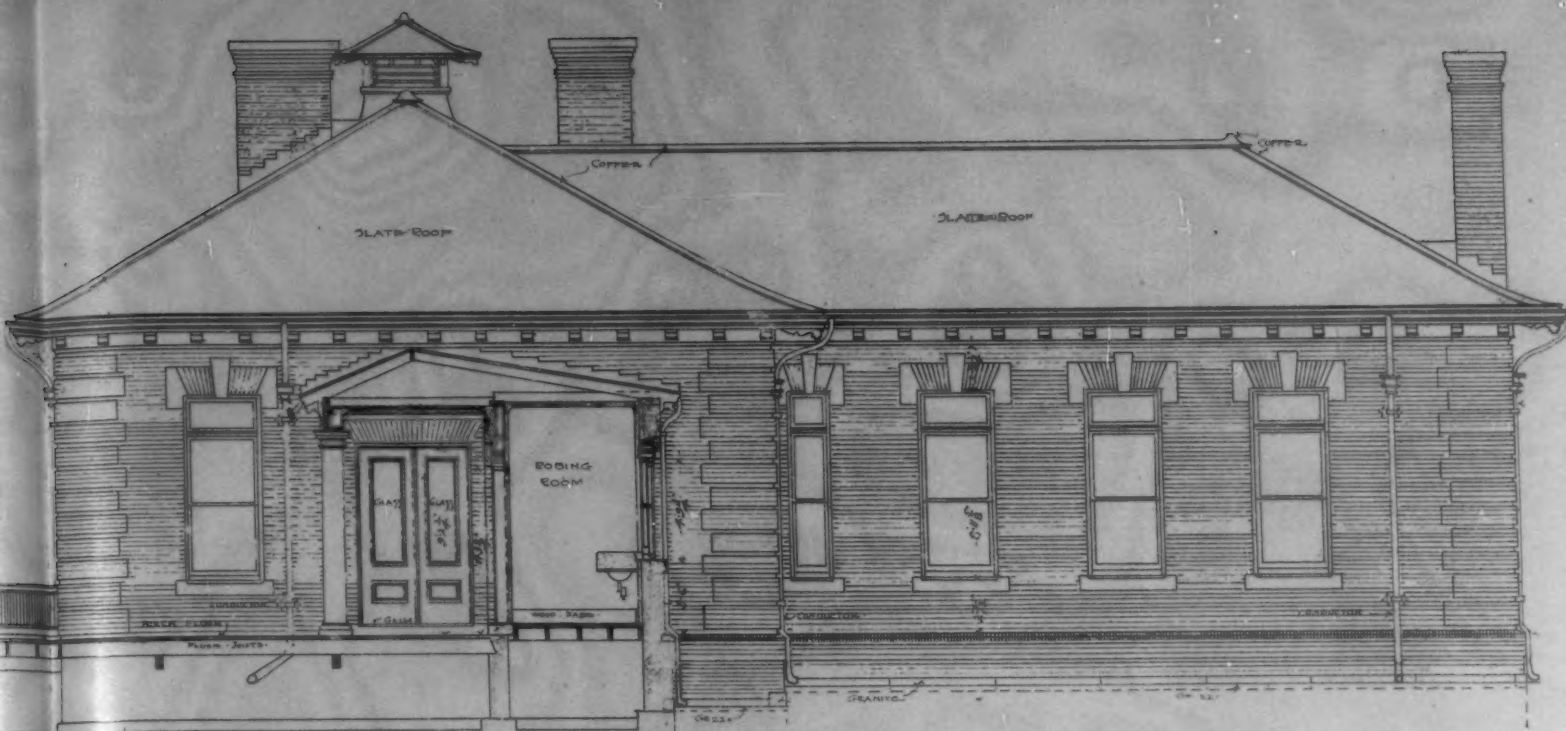


FIRST FLOOR, ADMINISTRATION BUILDING.

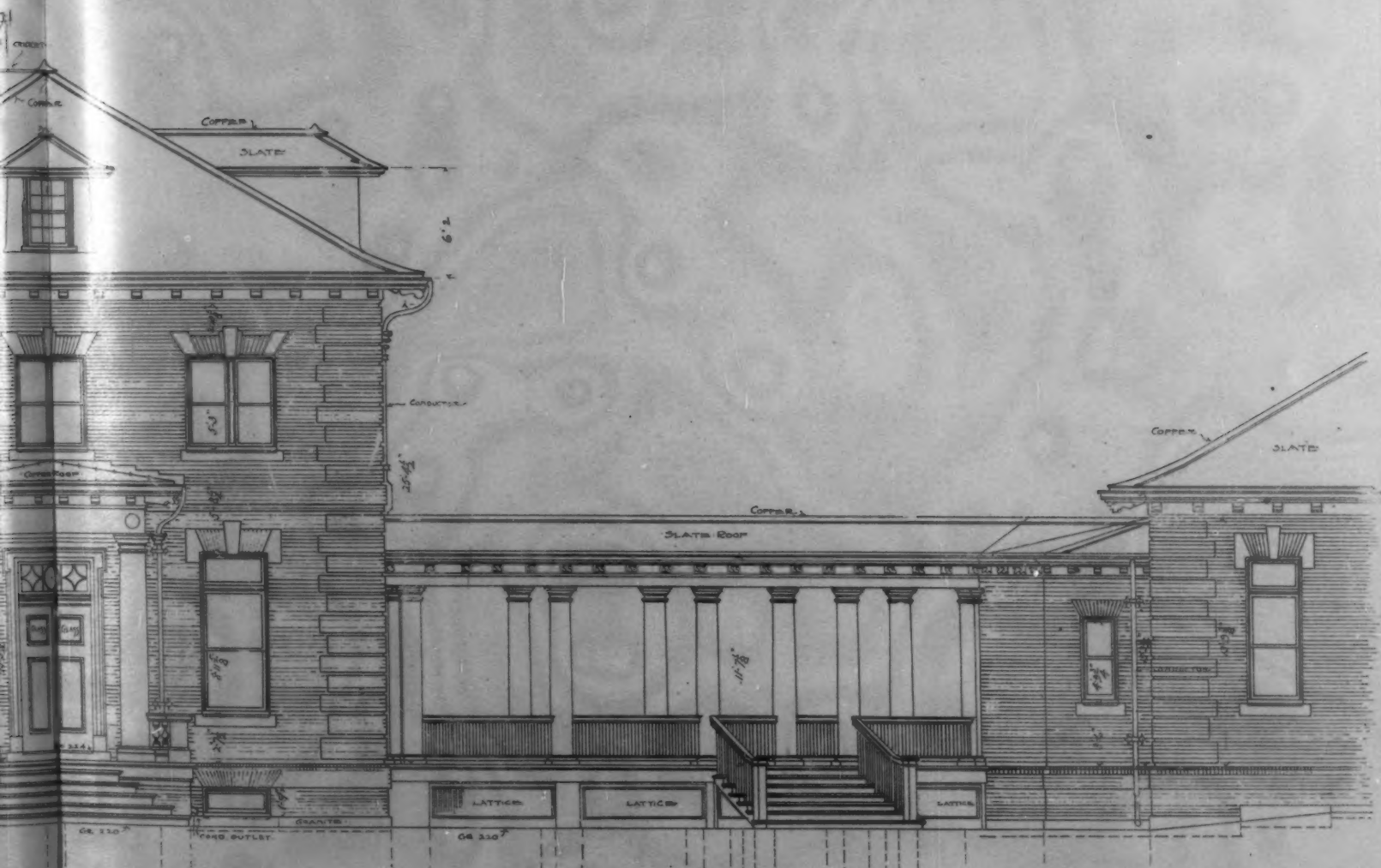




ELEVATION, CONTRAST
CONTAGIOUS HOSPITAL, 1
SHEPLEY, RUTAN & POLID



ELEVATION, DIPHTHERIA HOSPITAL.



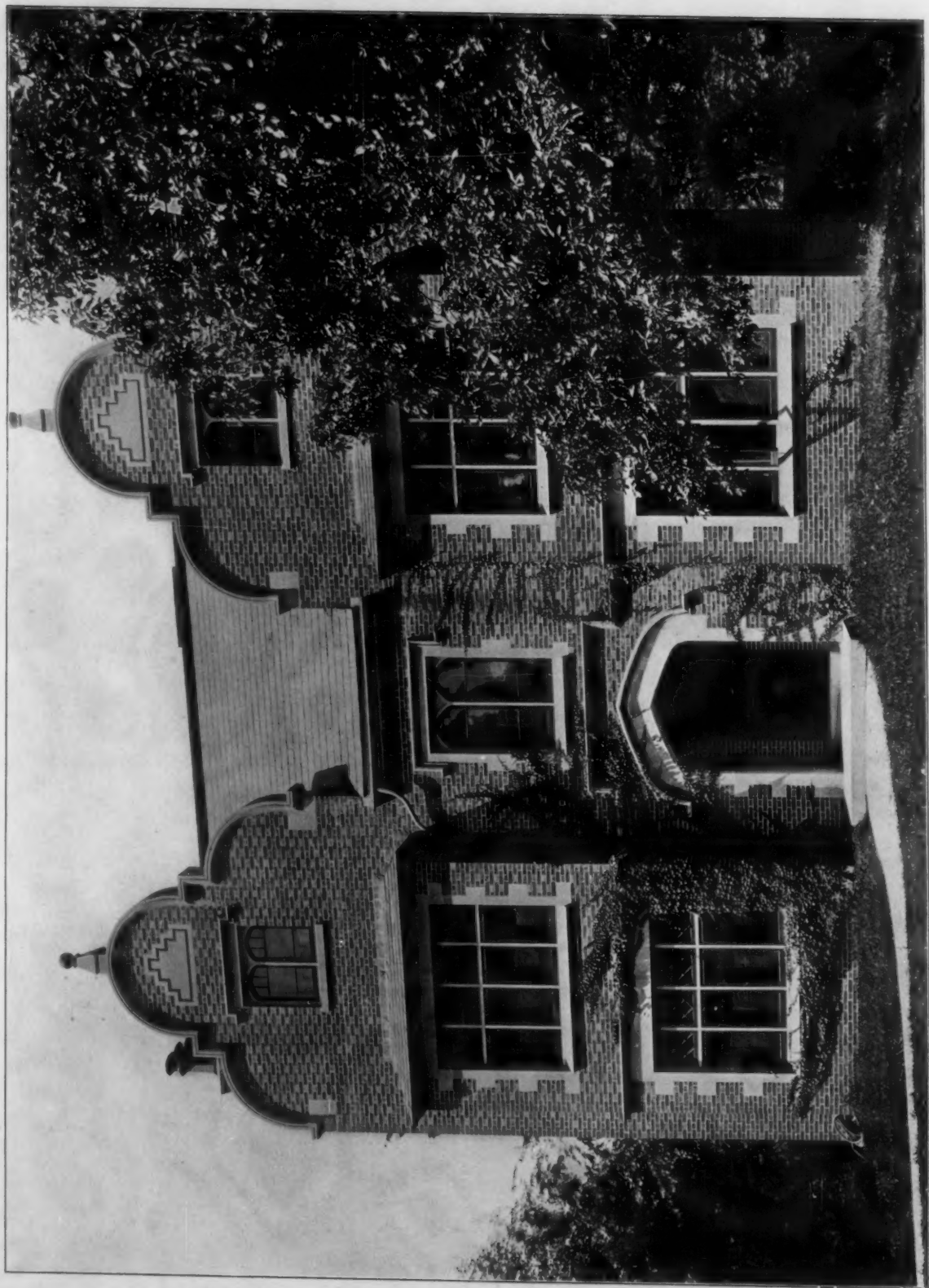
ION, ADMINISTRATION BUILDING.
HOSPITAL, BROOKLINE, MASS.
RUTAN & WOLIDGE, ARCHITECTS.





CONTAGIOUS HOSPITAL, BROOKLINE, MASS.
SHEPLEY, RUTAN & COOLIDGE, ARCHITECTS.

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HOUSE, BROOKLINE, MASS.

THE BRICKBUILDER,
AUGUST,
1902

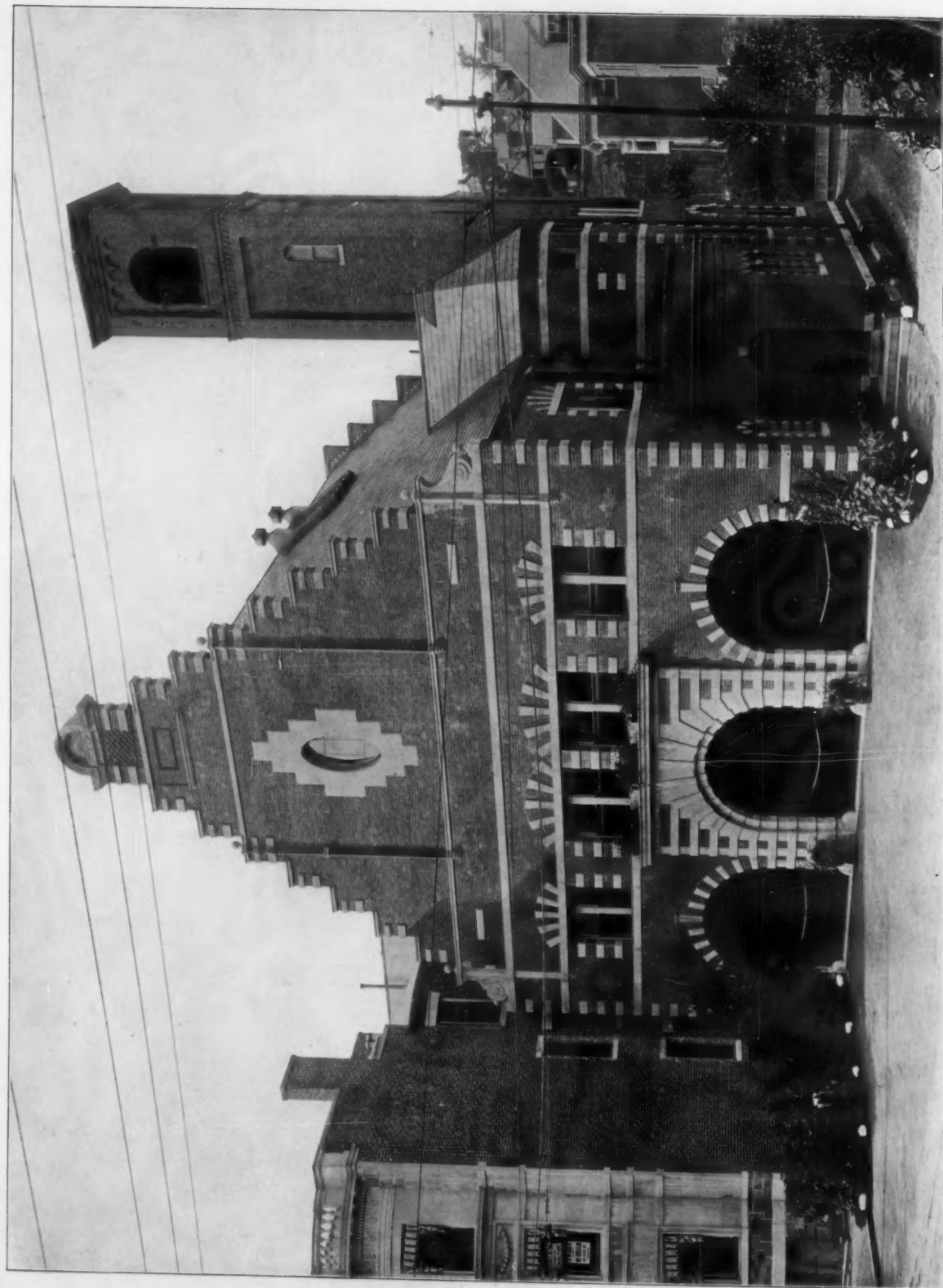
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✓ INTERIOR OF DINING-ROOM, MEMORIAL HALL, YALE UNIVERSITY
 SHOWING USE OF BRICK FOR INTERIOR FINISH.
 CARRÈRE & HASTINGS, ARCHITECTS.

THE BRICKBU'LOER,
 AUGUST,
 1902.

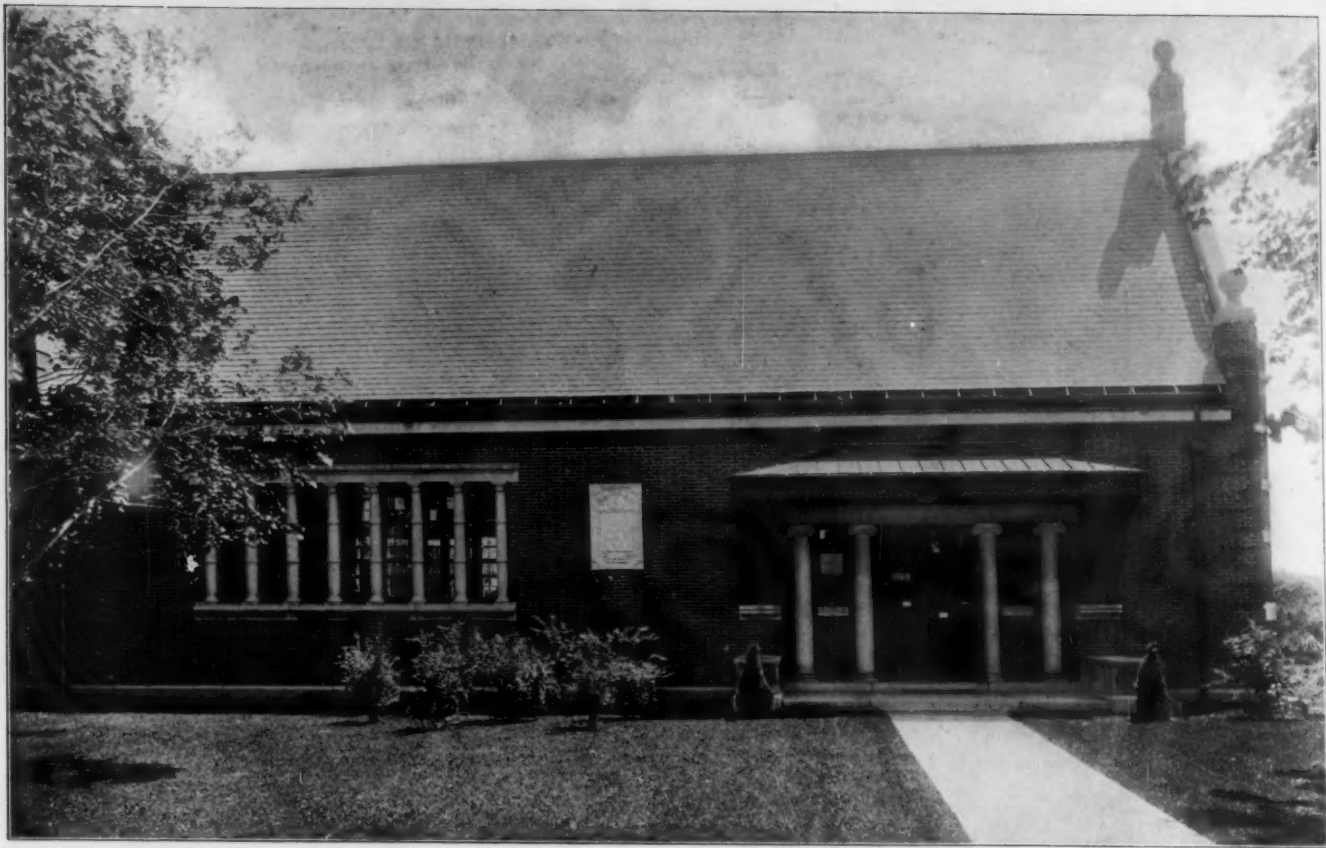
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FIRE STATION, BROOKLINE, MASS.
G. FRED CROSBY, ARCHITECT.

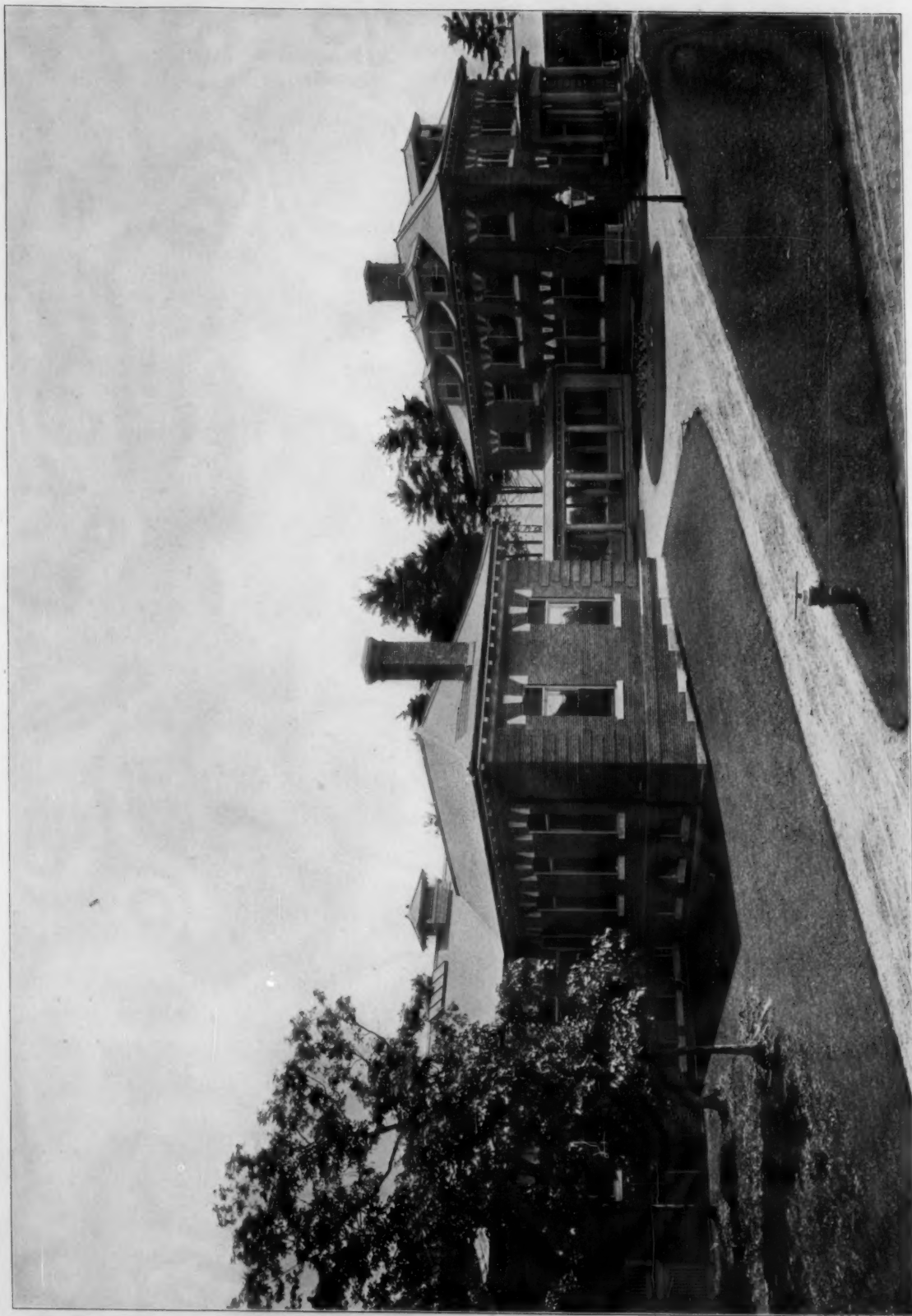
THE BRICKBUILDER,
AUGUST,
1902.

1904



LIBRARY, WESTON, MASS.
FOX, JENNEY & GALE, ARCHITECTS.

UOLM



CONTAGIOUS HOSPITAL, BROOKLINE, MASS.
SHEPLEY, RUTAN & COOLIDGE, ARCHITECTS.

THE BRICKBUILDER,
AUGUST,
1902.